MISSISSIPPI
ELECTRONIC RECORDS INITIATIVE

A case study in state government electronic records

Final Report

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An NHPRC-supported research project,1996-1999

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"The long struggle to establish the authority of archives to
determine the disposition of all public records has not been about
custody but rather about preserving an authentic and adequate
account of public actions in support of vital democratic virtue."
                                        --Terry Eastwood 1996:260

A man is flying in a hot air balloon and realizes he is lost. He
reduces height and spots a man down below. He lowers the
balloon further and shouts: "Excuse me, can you tell me where I
am?"
The man below says: "Yes, you're in a hot air balloon, hovering 30
feet above this field."
"You must work in Information Technology," says the balloonist.
"I do," replies the man. "How did you know?"
"Well," says the balloonist, "everything you have told me is
technically correct, but it's no use to anyone."
The man below says: "You must be in upper management in
some business."
"I am," replies the balloonist, "but how did you know?"
"Well," says the man, "you don't know where you are, or where
you're going, but you expect me to be able to help. You're in the
same position you were before we met, but now it's my fault."
                                        --Internet bon mot, 8/5/98

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Table of Contents

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Executive Summary

The Mississippi Department of Archives and History's NHPRC grant-funded electronic records project had four goals, aimed at laying the groundwork for the creation of an electronic records program for Mississippi state government based upon existing open computing standards and existing real-world systems.

To define the scope of the task by surveying state agencies' electronic records creation and maintenance policies.

Project staff devised a questionnaire covering computing history and present computing environments in a sample of state agencies. Staff efforts succeeded in achieving a greater than 80% response to the questionnaire. The resulting analysis showed that information technology staffs are almost completely unaware of the necessity for archival concerns in the management of electronic records, but are nearly unanimous in their sense that records created on the desktop are already difficult or impossible to manage (see questionnaire and report at www.mdah.state.ms.us/arlib/ersurvey.html).

To elicit discussion of the conceptual, economic, and technological restraints on electronic records preservation with other state agencies.

Discussions were continued at the beginning of the project with an existing Electronic Records Study Committee (ERSC) formed by another agency, but when that committee was disbanded staff created a new committee entitled Electronic Records Advisory Panel, consisting of a core membership taken from the most active members of the old ERSC and representing the most powerful infrastructure agencies, including Finance and Administration, Secretary of State, Attorney General, State Personnel Board, State Auditor, Mississippi Library Commission, and Information Technology Services. This committee has so far assisted us with preliminary reactions to our draft guidelines (see below), and will continue to advise us as we undertake to write additional guidelines. We hope that the committee will also assist us in promoting needed legislation.

To cooperate with the Mississippi Department of Health (MDOH) to devise and test specific strategies for the long-term preservation of electronic records.

During the grant period, we worked with the Mississippi Department of Health's records officer and the staff of the Patient Information Management System (PIMS), the Immunization Division, and the Information Systems Consultant's office to inventory records, understand the agency's electronic records infrastructure, schedule a representative subset of agency records, and devise general principles for retention periods, retention practice, and transfer methods. By the end of the period, we had fully scheduled the Information Systems Consultant's office (which is responsible for the agency's website and its email system, as well as having a rather larger than normal complement of desktop applications) and had laid the groundwork for scheduling the PIMS enterprise database. The Department of Health has now asked us to extend our work to the entire department.

Working with the Department of Health made it evident that the most significant problems of electronic records are human rather than technological. Agencies place a low value on permanent retention of records that have passed their period of administrative usefulness unless that permanent retention is mandated by explicit law, and even then they are reluctant to spend additional funds to do so. Furthermore, a detailed study of the history of bureaucratization and computer use in Mississippi state government in general revealed a serious lack of fit between theoretical electronic records requirement models, which envisage perfectly formed and static bureaucracy, and the complex historical particularities of the real organizations of an American state government. In addition, custodianship of the records is not only an issue of expense, but one of power: agencies frequently do not wish to give up their records, either because they do not wish them made public (whatever the law may say) or because they wish to make them public themselves. We had, therefore, to devise two new principles to accommodate these difficulties:

Conditional scheduling is a practice by which records of permanent significance are scheduled for permanent retention, but the schedule requires the agency to retain and migrate the records according to specific standards, either in perpetuity or until they wish to relinquish the responsibility; should the latter transpire, the agency is required to hand the records over to the Mississippi Department of Archives and History (MDAH) for retention.

Escrow archiving is the practice of sending to MDAH permanently-valuable records as soon as they are created. The schedule may specify a retention period during which the agency rather than MDAH will provide access to the records if the agency prefers, but MDAH will act immediately to preserve the records. Because MDAH can thus guarantee the authenticity of the archived records, records management schedules pertaining to such records can allow flexible disposal options that may be far more convenient for agency records creators than personal, workgroup, or centralized retention within the agency, which may require migration over long retention periods and complex security procedures to guarantee authenticity.

To work with the Department's State Records Center and Official Records Section to develop and disseminate standards and guidelines to facilitate the long-term retention, storage, and continued accessibility of permanent electronic records.

The original impetus for the grant project came from both MDAH's Archives and Library Division and Records Management Division, already suffering from the fact that the Department has had a split program since the creation of the Records Management Division in 1981. During the course of the project, records analysts from Records Management have worked closely with archivists and technology specialists from the Electronic Records Initiative to extend, modify, and adapt existing records management and archival practices to accommodate the unified management of both paper and electronic records. Records Management staff have provided extensive feedback on the project's ideas and efforts along the way and have assisted with the various parts of the project in providing fresh paper records schedules to support the emerging electronic records schedules being developed. As of the beginning of the year 2000, the Archives and Library and Records Management directors, in consultation with the director of the Department of Archives and History, have devised a new and quasi-unified method of inventorying and scheduling records that constitutes an initial step in functionally unifying the two tasks.

Referring to the results of the questionnaire to guide us to significant concentrations of electronic records, project staff have developed draft guidelines for electronic records in four genres: desktop files, email, webpages, and enterprise databases (see guidelines at www.mdah.state.ms.us/arlib/erglnav.html). Comments on these guidelines have been received from colleagues all over the world as well as from our archival consultant, Luciana Duranti, and

we are in the process of revising them and discussing them further with our Advisory Panel. We expect to have formal adoption in the summer of 2000.

Introduction: Competing models, actual fields

"Even the dullest mind would be impressed with the importance of carefully preserving early territorial records, but it would require some imagination and vision for a public official to see that the records which he himself is making are of equal importance with those that go before, and that they, too, will some day become valuable. And that is the great trouble in the proper care and preservation of State archives. We lose sight of the fact that the present is the time when carelessness and neglect are most potent for damage."

--Dunbar Rowland[1]

"...electronic records have launched archivists on an uncharted journey which compels a rethinking of basic assumptions about the purpose of archives and the methods used to accomplish that purpose."

--Margaret Hedstrom[2]

"The sense and object of governmental acts do not fall from the sky or emerge ready formed from social practice. They are things which have to be--and which have been--invented."

--Graham Burchell, Colin Gordon, and Peter Miller[3]

In 1996 the Mississippi Department of Archives and History received a grant from the National Historical Publications and Records Commission to investigate the creation of an electronic records program for Mississippi state government based upon an infrastructure of existing networks and software products. This grant came at a crucial time for archives all over the world as they attempt to cope with the transition from paper to other media for many official transactions and the enabling of new forms of interaction by the invention of new media and means of connectivity. The apparent pressures being brought to bear relate to those technology changes: while to a degree paper records require action in order to do away with them, generally speaking electronic records are subject to destruction through inaction.

It is plain that archival institutions focused on paper records have been notable for their inaction. In one 1995 email discussion of these issues among archivists, it was argued that archives were built on the model of "herbaria, which are collections of specimens of dead plants," and the writer contrasted this model to one of "greenhouses that collect and nurture living, growing plants"; the observer then noted that the two served completely different functions.[4] Doubtless that observer has by now rethought this very revealing metaphor; hopefully archives in fact do think of themselves as alive and relevant rather than dead and marginal. But the persistence of that kind of thinking was clearly very much alive as late as

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[1] Dunbar Rowland, *Twelfth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1914), 26.

[2] Quoted by Robert Martin in 1994 keynote address to Southern Archivists' Conference.

[3] "Preface," in Graham Burchell, Colin Gordon, and Peter Miller (eds.), *The Foucault Effect: Studies in Governmentality* (Chicago: University of Chicago Press, 1991), x.

[4] Jean Deken <jean.deken@STLOUIS.NARA.GOV>, "Electronic information," Archives & Archivists listserv, November 7, 1995, 15:23:35. As Luciana Duranti has pointed out, this attitude stems from the transition of archives in the United States from custodians of relatively current records to an antiquarian stance in the 1950s.

NARA's beleaguered effort in 1996-7 to allow agencies to substitute printed paper records for electronic ones.[5]

There has been a vigorous response to this challenge in Western archival circles, led by the NHPRC in the United States. The 1991 working meeting organized by the NHPRC identified major issues in dealing with electronic archives.[6] Since that time various research projects have responded constructively to the issues raised and action projects have attempted the implementation of models emerging from the research.[7] It has become clear that any workable state electronic records program will have to incorporate answers to all of the ten issues identified in the original NHPRC report. On many of these points we have chosen to test model solutions from various archival and information technology studies.[8] In using them, it has also become clear that the research on electronic records issues that has taken place since the report, because it has often focused in perfectly legitimate fashion upon artificially isolated problems, has produced results that can be used only as guidelines, not cookbook solutions. This point can be clearly illustrated with reference to two highly-visible and influential projects designed to establish underlying principles of archival retention and maintenance of electronic records, projects whose apparently fundamental differences cover an essential agreement on the nature of electronic archives.

These projects differ dramatically on the notion of archives as a place.[9] Perhaps the more well-known of them in the U.S., led by David Bearman and Richard Cox, centered at the University of Pittsburgh, and subsequently applied and tested in several milieux, has built a distributed "post-custodial" model that calls for electronic archives maintenance near the point of creation. Having decided with some justification that archivy as a professional discipline is too powerless to mandate and control preservation as an end in itself, the Pittsburgh model of "business acceptable communications" promotes the strategy of decentralized enterprise records repositories based upon a model of the modern capitalist enterprise and dependent upon an idea of convincing administrators that archival records are a valuable part of the "information asset."

Bearman and Cox have made effective paradigm-challenging arguments for record-level documentation using automatically-generated metadata[10] to contextualize electronic records, and their metadata model, if fully implemented, would unquestionably result in a completeness of documentation that historians and other social science researchers would find blissful. They might also, however, find it disturbing, since the veritably "panoptic" scheme of metadata they propose, only fully implementable in a comprehensive document-management system, would be capable of recording and attributing, with date and time stamps, every keystroke of all

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[5] I refer here to the uproar over NARA General Records Schedule 20.

[6] National Historical Publications and Records Commission, *Research Issues in Electronic Records* (St. Paul: Minnesota Historical Society, 1991).

[7] Notable state government projects have been carried out by New York State Archives and Records Administration and Delaware Public Archives.

[8] Most of the research projects have concentrated upon solving technical and archival problems; we found that creating a working system most urgently required solutions to questions 8 and 9, which represent the human obstacles to implementation of a system.

[9] Luciana Duranti, "Archives as a Place," *Archives and Manuscripts* 24(2), 242-55; for a critical analysis of this notion, see Jacques Derrida, *Archive Fever,* trans. Eric Prenowitz (Chicago: University of Chicago Press, 1996).

[10] We should say here that the metadata definition adopted by this project is the general "data about data" definition favored by both information scientists, who invented the term, and many electronic records projects. In our practice, the definition covers both granular record-level metadata and collective series-level metadata.

employees.[11] It is not clear that archivists or even historians have ever wanted this level of access, or if it is even legal *except* possibly in a government environment. What is certainly clear is that those whose work is being documented would resent such a complete level of documentation, especially since those of highest rank who controlled the system might potentially be able to avoid it or even to arrange not to be subject to it. Keystroke monitoring systems have had dubious effectiveness in the business world, not least because they generate so much data that nobody has the time to peruse it and they generate legal liabilities unless strictly designed and implemented. Finally, the Pittsburgh proposal that archivists in effect directly design computer applications, which is what the University of Indiana project proved they must do to apply the model, is so far away from the legislated tasks of government records managers that making such a change would require mammoth effort and the assertion of power and influence that Bearman has already argued archivists do not have.

Whether in fact the Pittsburgh model is "business acceptable" or not is also an open question, since the aim of business recordkeeping is to destroy most records as soon as feasible to avoid legal exposure, as business archivists have discovered.[12] There is also a degree of organizational schizophrenia embodied in it, since in a time of decentralized and flattened-hierarchy business models its complete implementation would create a hierarchical management tool. Yet the rhetoric of "running government like a business" has been so successful in the West since the "conservative turn" in the 1980s that the Pittsburgh model has been accepted by many as in some sense universally applicable without much critique until recently.[13] From our point of view as government archivists, however, we have to raise the more fundamental issue of whether, *in terms of recordkeeping*, what is (even theoretically) appropriate for capitalist business is in fact appropriate for democratic government.

From the archival point of view one need only observe that although there are exceptions, governmental entities tend toward a longevity to which most business entities can only aspire. Modern liberal democratic government seeks to solve the problem of establishing practical immortality for itself by resting its operations upon principles of "freedom" deemed to obey natural laws but reinforced by many different layers of "discipline" based centrally upon the individual citizen's internalization of specific behavioral regularities. Because government provides the scaffolding of societal regulation and is in theory answerable to all of the governed, the activities of government itself must be seen to be hyperregulated. Capitalist businesses, on the other hand, depend upon the orderly social environment created by this governmental establishment and are subject to the supposedly equally natural operations of Adam Smith's

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[11] For the notion of "panopticism" as a surveillance mode, see Michel Foucault, *Discipline and Punish: The Birth of the Prison,* trans. Alan Sheridan (New York: Vintage, 1995). Note that in the recent trial of Pittsburgh functional requirements analysis at Indiana University, one of the selling points of the application turned out to be that university administrators wished to use it for restricting access to specific categories of data and determining who was misusing it--clearly a surveillance application. See Philip C. Bantin, "Developing a Strategy for Managing Electronic Records--The Findings of the Indiana University Electronic Records Project," *American Archivist* 61(2), 1998, 348, and "The Indiana University Electronic Records Project Revisited," *American Archivist* 62(1), 1999, 153-63.

[12] See articles on the state of play in business archivy to date in *American Archivist* 60:1. *American Archivist* 45:3 reports the painful early efforts of business archivists, and things don't seem to have changed much in the interim; if anything, many formerly significant projects have, as the result of mergers and acquisitions, disappeared, and their archives have been dispersed or destroyed, precisely to limit liability. The advice to keep no more records than legally required is one of the first counsels given to aspiring MBAs.

[13] An articulate and influential exception is NARA's Ken Thibodeau, but he has certainly not been alone. Others may be found cited in Linda Henry's recent article, "Schellenberg in Cyberspace," *American Archivist* 61 (1998): 309-327, which also speaks from the real-world experiences of handling governmental electronic records at NARA.

"invisible hand." But their need to extract value from the asymmetry between employee and customer as their only warrant for existence and their answerability to stockholders first and to the community only a very distant second, implies a radically different regime of *internal* governmentality--and hence of recordkeeping.[14] As Robert Martin observed in 1996, however, archival attention to the actual process of recordkeeping in its bureaucratic context, by any archival theorist, has been practically nil.[15] And there is more to recordkeeping than what is wishfully outlined in policy manuals.

The arguments of the more historically distinguished electronic-records camp, led by Luciana Duranti and Terry Eastwood and institutionally centered at the University of British Columbia (UBC), are therefore the more persuasive from our point of view because of its historical critique of recordkeeping practices. The UBC plan rests its contention that archival records should be centrally controlled and maintained upon the time-tested results of diplomatics.[16] The UBC model, which depends upon centralized archives and document registries, reflects the ideal of modern hierarchical bureaucratic state organization. It assumes strong central authority; like the Pittsburgh model it bases its notions of reliability on detailed record-level metadata documentation, though UBC researchers are very "strict constructionist" in their definition of what counts as metadata, and they propose a system of formal metadata nowhere near as elaborate as the Pittsburgh metadata set.[17] Unlike the Pittsburgh model, the UBC model grounds its notion of authenticity upon custody and preservation of records by a neutral archives rather than by the originating entity.[18] It also reflects the common assumption that the most important records are those that are made and/or approved by the managers of a bureaucratic entity, so it concentrates less on recording the activities of those who are not decision-makers. This model is thus much more explicitly designed to meet the needs of government than is the Pittsburgh model, because it reflects the layers of structure, authority, and discipline that characterize liberal democratic governments, it prescribes an explicit recordkeeping regime, and it recognizes government's need to be *seen* to be accountable.

The consensus position that has emerged in all recent research on technical issues in electronic recordkeeping is that it demands intervention at the design phase of records systems in order to preserve the metadata crucial to the recreation of systemic links between documents (the "archival bond" in Duranti's felicitous terminology). The elegant recordkeeping systems designed and implied by Bearman/Cox/Pittsburgh and Duranti/Eastwood/UBC, their principles more or less completely embodied in commercial systems meeting the Department of Defense's 5015.2 Records Management Application standard,[19] imply an ideal of "perfectly rational bureaucratization" in the Weberian sense. Thus both advocate much more detailed control over electronic records than archivists have ever been able to exert over paper ones:

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[14] See Burchell, Gordon, and Miller, *The Foucault Effect*.

[15] Robert S. Martin, "Managing Government Information in the Digital Era," keynote speech, Southern Archivists Conference, New Orleans, 1996. In 1994, Margaret Hedstrom had admitted that "changing the norms of individual recordkeeping" would be a necessary archival activity; see her "Electronic Archives: Integrity and Access in the Network Environment," *American Archivist* 58 (1995), 323.

[16] Luciana Duranti, "Diplomatics: New Uses for an Old Science," Parts I-V, *Archivaria* 28 (Summer 1989), 7-27; 29 (Winter 1989-90), 4-17; 30 (Summer 1990), 4-20; 31 (Winter 1990-91), 10-25; 32 (Summer 1991), 6-24.

[17] We will discuss this issue later; the UBC metadata set in fact only includes what we see as "intrinsic metadata" carried as part of the record and does not mention additional "meta-metadata" that are generated by management systems used to handle, maintain, and provide access to the records themselves, and that are accommodated in great detail by the Pittsburgh scheme.

[18] Luciana Duranti, "Reliability and Authenticity: The Concepts and Their Implications," *Archivaria* 39 (Winter 1994-95), 5-10.

[19] See the Department of Defense's website for this standard, http://jitc-emh.army.mil/recmgt/.

much more "capillary discipline" over the recordkeeping function.[20] As projects designed to produce models, neither takes into active consideration the fact that governmental recordkeeping systems are historical constructions, constantly evolving, that cannot be accurately reflected in such perfectly static recordkeeping systems without continuous intervention. Further, in the technological and political worlds of today--both arguably involved in a significant mutual dialectic of change, such that we know neither what technological environment will dominate in the near future nor what far-reaching effects it may have on governmentality itself--this is like trying to nail jelly to the wall.

There is in fact an excellent argument to be made for the contention that in order to work effectively, the best electronic (or indeed any) recordkeeping achievable in any United States government as a whole will have to be "good enough," and for archivists to punish themselves for not somehow causing perfection to be achieved is only a masochistic exercise. Further, by ignoring the fact that recordkeeping systems themselves are historical constructions, that they are historically and for historical reasons good, bad, weaselly, perjurious, or splendidly honest, these approaches seek to engineer into recordkeeping systems characteristics that since Jenkinson it has not been the business of an archivist to meddle with. Our own situation provides an instructive example. In Mississippi law, the Department of Archives and History is explicitly forbidden from dictating recordkeeping methodologies to other state agencies; it may only draw up recordkeeping guidelines. Luciana Duranti, who served as a consultant on this project, reminded us that the good or bad qualities of an agency's recordkeeping system are *part of the record*, since its qualities will have affected the way it was capable of supporting the work of the agency. For example, we found that the Mississippi Department of Health's Patient Information Management System, an enterprise-level database provided to them under contract by a private firm and deployed throughout a statewide clinic system, had unused fields that clinic employees in the counties adapted to their own--sometimes disparate--local purposes; as a result, the official data dictionary did not accurately document the system *as used by the employees*, and in this and other ways the system was not used as the programmers intended. Those facts were part of the history of that system, to be documented by us if possible; to be retained according to a duly-approved schedule; but to be improved if at all by the Health Department, not by us. As an agency we are statutorily not in the business of making a better government; we are in the business of documenting other people's attempts to do so (and sometimes to do the reverse).

Further, the definitions of "better government" have shifted in the past and will do so in the future. If good government is bureaucratic government, it must be admitted that U.S. state governments are very imperfect. Repeated historical efforts to bring them under bureaucratic discipline have been notable for their failure. Installation of the electronic document management systems implied by both the Pittsburgh and UBC schemes requires, to varying degrees, a level of strict hierarchical organization and careful policing of explicit administrative policies and procedures that is not viewed as acceptable or indeed feasible in many governmental contexts,[21] though there are exceptions (it is not coincidental that the UBC model

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[20] This terminology is borrowed from Foucault, *Discipline and Punish*. It is clear that the attempt to frame coping with technological change as a problem of gaining control over records is another step in archivy's struggle for professionalization and the power that comes with it, using technological savvy and management jargon as a lever. The "Camp Pitt" workshops as a tool of the NAGARA Professional Development Committee for creating cadres to establish centers of this thinking in every state have had varying effectiveness, however--perhaps because of the ambivalence of governments toward long-term and accountability-driven recordkeeping.

[21] Note the variable success of the Uniform Law Commissioners' successive model Administrative Procedure Acts; by 1981, when a major revision was proposed, only half the states had adopted either the 1946 or 1961 versions. Mississippi is far from the only state still lacking such a comprehensive act.

is being successfully applied at the Pentagon: perfect systematic recordkeeping is easier to mandate in a "total institution" like the military, where courts-martial are available as sanctions). Although resistance to such models would perhaps not be expressed overtly, electronic records systems that implement policies and procedures related to archival theory or abstract notions of what constitutes democratic accountability, rather than the mission of the entity itself, are unlikely to be accepted (or might simply be sabotaged) and might well lead to the failure of any but the most rudimentary preservation of electronic records. Indeed they may even be illegal, to the extent that they amount to an unlegislated version of what jurist Lawrence Lessig has referred to in cyberlaw as "code as code"--that is, that the computer code that constructs the virtual world of a document management system in effect becomes unlegislated law, because only what it specifies can take place in that world.[22]

In short, electronic records, like all other records of government, are historically situated. In order to preserve them adequately for any purpose, it is necessary to go beyond theoretically satisfying models into the intractable world of human group action. The "hard problem" here is to understand the discourse that archival models embody and imply, to discover their points of fit and misfit with the real world of government recordkeeping, to recognize the archives' involvement and indeed its role in the politics of recordkeeping, and to devise a pragmatic, "satisficing" solution for electronic records' preservation, adequate to document the actual recordkeeping practice developed by governmental agencies and flexible enough to weather budget cuts, political infighting, and outright incompetence. Without such an effort, we believe that it is impossible to design an effective program for the preservation of governmental electronic records in Mississippi, or indeed in any other state.

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[22] Lawrence Lessig, "The Constitution of Code: Limitations on Choice-Based Critiques of Cyberspace Regulation," *Journal of Communications Law and Policy*, Summer 1997, 181-191; see also his *Code and Other Laws of Cyberspace* (New York: Basic Books, 1999).

Recordkeeping and bureaucratic form

Historically, archives have been significantly involved as repositories of power in the emergence of modern nation-states; to quote Max Weber, "Increasingly, all order in public and private organizations is dependent on the system of files and the discipline of officialdom, that means, its habit of painstaking obedience within its wonted sphere of action."[23] But however evident it is that the bureaucratic organizational form generates a lot of records, Weber himself observed that bureaucracy was much less dependent upon its records than the records were upon bureaucracy, when he remarked that anarchists were ill-advised in thinking that destruction of records would destroy government domination: "the settled orientation of *man* for observing the accustomed rules and regulations will survive independently of the documents."[24] Further, Weberian theory with respect to bureaucratization expounded an *ideal* process, based upon historical examples but historically situated at a juncture when the achievement of perfect bureaucratization, if it turned out to be achievable at all, still lay in the future.

Although Weber's predictions did not quite turn out as expected, many of his observations about historical and contemporary bureaucratic organizations were so accurate that they have retained their relevance to modern organizational theorists.[25] As David Beetham has argued, however, bureaucratic organization and power are not intelligible if they are simply theorized as is, locked in a timeless "bureaucratic present" at the "end of history," where the only problem is how to make bureaucracy work better. Even if this is the central goal that an official government archives must support, understanding the historical and sociopolitical context is vital if the relation of governmental organization to recordkeeping is to be sufficiently understood.

Max Weber was part of the late nineteenth-century pantheon of theorists of humankind, including Hegel, Durkheim, Marx, Freud, and Darwin, who were provoked to their reflections by the new synergetic amalgam of nation-state and industrialism. Weber's observations were made in the context of a history of bureaucratization, which in large he saw as *a transfer of legitimate power from personal to impersonal means*. Charismatic leadership was replaced by institutionalized monarchies which were in turn replaced by elected leadership. Weber's view of bureaucracy is that of a liberal elite, who believed that the efficiency of bureaucratic systematization--combined, of course, with external elite control--would provide a tolerable and indispensable mode of governmentality for democratizing Western nation-states and capitalist ventures alike. Indispensable, because Weber believed that the tasks required for the administration of large populations, demanding equal treatment under the dominion of law, dictated hierarchical bureaucratic structures governed by specifically-defined rules and manned by specialists who owed all their living to their performance in the job of providing services.

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[23] Max Weber, *Economy and Society*, vol. 2 (Berkeley: University of California Press, 1978), 988.
[24] Ibid. Anthropologists, notably Pierre Bourdieu (*Outline of a Theory of Practice* [Cambridge Studies in Social and Cultural Anthropology 16, Cambridge: Cambridge University Press, 1977]), have clearly established the importance of non-documentary forms for institutionalizing behaviors, including dress, linguistic tone, architectural arrangements, habits of physical comportment, and the whole array of "equipment" related to every facet of human activity, all of which reflexively imply behavioral forms.
[25] See the standard handbook by David Beetham, *Bureaucracy: Second Edition* (Minneapolis: University of Minnesota Press, 1996); Chapter 1, "Models of Bureaucracy," discusses current models and their relation to Weberian theory. Weber remains relevant to modern archival theorists as well: cf. Michael Lutzker, "Max Weber and the Analysis of Modern Bureaucratic Organization: Notes Toward a Theory of Appraisal," *American Archivist* 45 (1982), 119-130; David Bearman, "Diplomatics, Weberian Bureaucracy, and the Management of Electronic Records in Europe and America," *American Archivist* 55 (1992), 168-180.

Because Weber saw bureaucratization as indispensable both to the administration and the legitimation of modern state and corporate power--hence his characterization of the process as "rationalization"--he considered it a fundamental part of modernity, the "iron cage" within which complexly-organized and populous modern societies were compelled to be confined in order to function. And he considered the control of the great power it represented to be a significant challenge to the individual freedom that had created it and indeed a challenge to governing elites themselves.

The power of bureaucracy as a governing mechanism lies in its nature as a sort of perpetual-motion machine: the means of its reproduction are built into its nature in the form of its rules and its files. For this reason, Weber felt that bureaucracy could only be harnessed by setting multiple bureaucracies in balance against each other and creating institutions of control that were equally powerful, manifested in a "leadership democracy" whereby democratic process was harnessed to legitimate the power of creative, visionary ("charismatic") individuals. Sociopolitical critique of Weber's position, however, has pointed to the necessity for understanding the purposes of bureaucratic organization as not merely technical but also social; and for emphasizing more clearly the necessity for democratic accountability in governmental bureaucracy, beyond simply legitimating elite leaders. Weber's elevation of bureaucracy to an effective "theory of everything" for modernity hid the fundamental differences between government and business that we have already noted, but the applicability of the Weberian model to government remains relevant.

Unfortunately for our purposes, therefore, Weber and other theorists of bureaucracy have actually had very little to say about the "files" that are so important an aspect of bureaucratic self-perpetuation. For an understanding of their importance, it is necessary to turn to the role of records in the creation of law.[26] In a rationalizing bureaucratic state, it is at least formally the "rule of law" that serves as structuring principle, the "public ethic of correct behavior...which requires officials to administer the population impersonally through the application of abstract, formal rules to particular cases."[27] Government exists to execute and administer the law's requirements, and it is supposedly this legal foundation that guarantees the governed population accountability, in that the population itself creates the laws through its representatives. It is also necessary, however, to go critically beyond this normative evaluation to examine the function of the files and the archival institution that maintains them within the bureaucratic state.[28]

How is the history of bureaucratization reflected in the history of archives? Although all historical forms of government have depended to increasing degrees upon records, those who created and managed the records have also changed over time, both in their relation to leadership power and to the governed population. Material means of recording governmental information, not dependent upon the memory of living persons, were adopted very early in human history; in fact such records were specifically developed to support government

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[26] Note in this regard that Bearman and his colleagues have stressed evidentiary values in the appraisal of electronic records for retention; this is clearly the kind of argument that is meant to sway business recordkeepers, but it should not be the only value used in appraising government records. The proposed Master of Archival Science curriculum offered recently by the SAA stresses under "Contextual Knowledge" the following relevant categories: US organizational history; US legal system; US financial systems. Clearly a critical knowledge of all three of these is vital to understanding how recordkeeping works in a given organization, and without such knowledge it is literally impossible to track even the existence of electronic records.

[27] Christopher Dandeker, *Surveillance, Power, and Modernity:Bureaucracy and Discipline from 1700 to the Present Day* (New York: St. Martin's Press, 1990), 49.

[28] Dandeker has argued that the central role of the files is in facilitating the surveillance of the governed population, thereby adding to the power of the bureaucracy.

purposes, because powerful people could concentrate enough wealth to divert resources to the creation of an infrastructure of memory to support further accretions of power. As long as the important records were memories, whose who retained them were themselves accorded the treatment that the importance of the records deserved.[29] Once records became material objects, however, those who maintained them lost significant power themselves unless they surrounded their custodial activity with exclusivity of some kind--hence we can also assume that custodianship of the files and understanding of their relationship to real people and events emerged very early as a center of power in itself.

But there is a significant difference--now playing itself out in the archival debate over custodianship, but hardly a new theme in archival writing--between archives kept selectively by a governmental entity to support only its own power and its consistent reproduction (so-called "vital records") and archives kept by a governmental entity on behalf of the public interest or of some abstract "historical" interest. The history and present status of archives have been much obfuscated by the failure to address directly the fact that possession of the "files" of a bureaucracy does actually amount to a position of power. The "files" of a governmental bureaucracy--its archives--are a significant instrument of "governmental rationality," the practice of government as it extends to every individual in the population; this includes the management and ordering of the citizens, where the concept of citizenship is ordered as well. For this reason the different public positions taken by archivists with respect to archival custodianship are actually quite significant political moves, not just arbitrary choices based upon cost-benefit analyses. To quote Jacques Derrida: "There is no political power without control of the archive, if not of memory. Effective democratization can always be measured by this essential criterion: the participation in and the access to the archive, its constitution, and its interpretation."[30] The whole notion of governmental preservation of the archives of government is closely connected with the idea of a liberal democratic government as a "machine that would go of itself":[31] if governmental archives are preserved by a trustworthy not-quite-third party, part of the government for the sake of security but crucially independent of it in some sense for the sake of trustworthiness to the governed, then the governed may be assured that they can secure adequate oversight through the freedom to peruse the records.[32]

This is, however, a relatively recent innovation. Luciana Duranti has traced the notion of the archives as a specific guarded place for official records in the West from classical times; her discussion reveals the historical process through which "archives as a place" became the instrument of legitimation for the records kept within that place.[33] Duranti argues that prior to the eighteenth century, the placement of a document in an archives--the crossing of the "archival threshold"--was a necessary step in establishing its legal effectiveness, but this practice changed with the French Revolution, when the archives of the French monarchy were burned in

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[29] For comparison, consider the preferential, even reverential treatment accorded to elders who are charged with the maintenance of tradition in nonliterate societies: Jan Vansina, *Oral Tradition As History* (Madison: University of Wisconsin Press, 1985).

[30] Jacques Derrida, *Archive Fever*, p. 4, n. 1. These sentiments have been more softly echoed by Terry Eastman--see epigraph to this report.

[31] This expression was actually used by James Russell Lowell in 1888 to describe the polity framed by the U.S. Constitution: see Michael Kammen*, A Machine That Would Go of Itself: The Constitution in American Culture* (New York: Knopf, 1986).

[32] Most state archives are in some sense placed in the executive branch of government, where they can be vulnerable to executive choices. H.T. Holmes has suggested (personal communication) that good arguments can be made, in view of the political volatility of most legislatures and chief executives, for associating the archives with the judicial branch, although apparently no state in the US has made this choice.

[33] Luciana Duranti, "Archives as a Place."

an attempt to destroy its legitimacy, and it worsened in the face of mounting piles of "modern" records. When France established its National Archives in 1794, they were designed to house the records of defunct bodies only, initiating a split between administrative and historical archives. This trend also affected the national archives created by England in 1838, as a result of general disgust with the atrocious state of English public records; and the United States in 1934, after years of lobbying by--significantly--the American Historical Association. Archives thus became a repository of shared national identity, not the guarantor of active or semiactive records. As a result of this separation, both active and semiactive records were most frequently kept in the departments where they were used, and were frequently carted off by officials at the end of their service. Recordkeeping practice in all three countries tended to reflect the degree of governmental rationality, in that bureaucratized offices kept more systematic and uniform records than did those more subject to patronage.

As Duranti points out, efforts were made, in the light of legal requirements, to establish recordkeeping policies and procedures, including classification and registration systems, that could reinforce the reliability and authenticity of government records. Archival theorists, especially in England where archival custody of at least ancient records had in many cases remained unbroken, continued to argue for the importance of archives as a place, a neutral and disinterested place where authenticity could be guaranteed. Ideally, according to Hilary Jenkinson, this neutral party (the independent archives) would have no part at all in deciding what should be represented as adequate documentation of governmental actions. It is interesting that so many archivists have echoed Jenkinson's "hands-off" principle, since it was so clear a case of elevating "is" to "ought"--as we shall see, a reflection of the specific character of English bureaucracy. But Jenkinson was not shy in prescribing ideal recordkeeping activities carried out by an administrator keeping "modern" records:

(ii) he must leave memorial of all the proceedings of importance that occur in his office: this provided for,
(iii) he must preserve as little as possible:
(iv) he must deposit (i.e., turn his documents into Archives) as regularly as possible, and thereafter leave them undisturbed: and
(v) he must arrange and classify in such a way as to help the Archivist as much as possible....[34]

This prescriptive passage went on to detail the activities required for maintaining a detailed register of all records received and generated in an office, complete with eleven metadata items. The passage is symptomatic of several aspects of archival practice that are importantly related to the issues of bureaucratization and power that we have been considering. But most significantly, it assumed that records would be archived regularly and often.

The present round of concern for the medium in which files were preserved is not the first such episode, even in the U.S., as Theodore Schellenberg has recorded. Schellenberg, as part of his explanation for the proliferation of modern records, outlined a history of American government filing systems--certainly highly significant parts of the "equipment" of bureaucracy, and means by which the power of its information could not only be assembled but effectively cross-referenced and thereby put to use. He stressed the emergence of duplication technologies: the press-copying machine in 1780, typewriter in 1868, carbon paper in 1905, and mimeograph and other formats later. He pointed also to the introduction of file holders and vertical files, replacing shelves in 1868. From Schellenberg's account it is clear that there were

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[34] Hilary Jenkinson, *A Manual of Archive Administration*, reprint, 2nd. edition (London: Percy Lund, Humphries & Co., 1966), 152.

two major recordkeeping watersheds in national governmental life. The first was a move toward new technologies made in the wake of the Civil War and probably under the pressures of managing Reconstruction, in 1868; it entailed the adoption of new physical file-management technologies for the same paper records. The second major change was made when the Taft Commission on Economy and Efficiency recommended in 1912 the adoption throughout the Federal government of typewriters and carbon paper. This change replaced the single master file, which had to be checked out of and into a guarded file room, with multiple copies of documents filed in many decentralized departmental files. As a result, the register system was abolished, and with it a central record of all official documents.[35] This second and very profound change was itself made endemic under the pressure of the U.S. participation in World War I. The efficiencies realized must have been to help decision-makers secure access to files in a more expeditious way, not to prevent the multiplication of papers to be handled! Clearly this innovation also made centralized control of record flows impossible and lessened the importance of records specialists. The task of filing all those copies was further discounted as it was placed in the hands of low-paid clerical workers.

Another significant and telling change was made when the U.S. National Archives under Schellenberg dropped the notion of archival documents as "evidence" and "qualified the reasons for preservation as completely separate and distinct from the *quality* and *authority* of the documentary material preserved, and exclusively linked to its use" for "reference and research purposes."[36] This antiquarian function still underlies the public view of the activities of NARA today, as a description of NARA's activities on its website makes plain (emphasis added):

> The National Archives and Records Administration (NARA) is an independent federal agency that *preserves our nation's history and defines us as a people* by overseeing the management of all federal records. Enshrined for posterity in the original building in Washington, DC, are the cornerstone documents of our government: the Declaration of Independence, the Constitution of the United States, and the Bill of Rights. But the National Archives and Records Administration is more than famous documents. NARA is a public trust upon which our democracy depends. NARA enables people to inspect for themselves the record of what government *has done*. NARA enables officials and agencies to *review* their actions and helps citizens hold them accountable for those actions. And NARA ensures *continuing access* to essential evidence that documents the rights of American citizens, the actions of federal officials, and the national experience.[37]

Though NARA does indeed today bear responsibility for setting standards for Federal government recordkeeping, it has very little power to enforce those standards, and must rely upon interest groups from among the citizenry to aid it in doing so, as the actions of the American Historical Association intervention in the PROFS case illustrates. Schellenberg's ostensible argument for this drastic curtailment of the function and power of archives was the unmanageable bulk of modern records and the decentralization of modern filing systems.

Was Schellenberg's argument, which through his influence has become the rationale for the massive destruction of modern records in the U.S., even valid? To begin with, what are "modern" records, apart from their physical medium? In fact, "modern" records are the

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[35] Theodore Schellenberg, *Modern Archives: Principles and Techniques* (Chicago: University of Chicago Press, 1956), 84. In this respect, it can be clearly seen that typewriters plus carbon paper represented a structurally significant technology that clearly implied and prepared the way for word processing and a diminishing distinction between original record and copy.
[36] Duranti, ibid., 249.
[37] From http://www.nara.gov, 2/23/99; emphasis mine.

voluminous records of bureaucratized government in modernity. They are different from the records of kingdoms or premodern empires, because they support a different form of governmentality. They record, often minutely, the activities of the ever more populous governed and of government functionaries themselves. Such records reflect the data-gathering activities of governments equipped with the statistical tools developed in the nineteenth century for the description and analysis of populations--what Foucault has referred to as the totalizing but depersonalizing "mathesis" of populations, made thinkable by the emergence of human beings as subjects of scientific research in the eighteenth century.[38] And without them, the "capillary discipline" of the minutely focused surveillance and supervision of large populations is impossible.[39] Further, although Weber discounted the seriousness of a loss of governmental archives, he was very clear on the utility of the bureaucratic structure itself as an instrument of control that was capable of being exploited by anyone who could dominate relevant positions of power. Even Duranti, however, does not remark that Schellenberg's demotion of archives from handling recent records, and the corresponding curtailment of public access, came in 1953, at the height of the Cold War, when there were ostensible public interests to be served by making governmental archives antiquarian and current government records inaccessible to the public. As Red scares waned and public opinion shifted, the Freedom of Information Act in 1966 and its subsequent amendments were required to open many recent records to inspection.

It is very important indeed who decides what "proceedings of importance" in a governmental office should be memorialized by being recorded, what counts as a public record, which public records will be preserved for posterity, and how these public records should be arranged and made accessible--these are serious political acts. This is a problem at every level of government. The list of Federal Freedom of Information Act exemptions includes "inter-agency or intra-agency memoranda or letters which would not be available by law to a party other than an agency in litigation with the agency." The most frequently-used exemption under this rule is apparently the "deliberative-process privilege," that explicitly exempts evidence of the complex processes behind government decision-making. A well-known public-access proponent has observed that "The oft-stated purpose of the privilege is to protect government workers from having to operate in a fishbowl where all their recommendations are second-guessed by outsiders," but he presented evidence that agencies could manipulate the law to exempt broad ranges of materials that might reveal consultation patterns.[40] Who decided that there was such a privilege, and to what purpose? Certainly it makes a mockery of the principle that executive action should be the focus of archival documentation.

If access is denied by records' not being kept, the problem of assuring accountability through the record becomes insuperable. Without some kind of register system (abolished in 1912), it is impossible to know what records were *not* kept because there is no record of their having been created. Many activities of government are indeed never even minuted in the form of informal notes: they are carried out in oral communication, either direct or mediated by telecommunications. Richard Barry, a leading records management consultant, in discussing the "recordness" of voice mail, observed somewhat naively that "We have chosen traditionally not to record telephone conversations for a number of reasons--mainly because it is seen as a practice which would cross a strong cultural line of personal privacy and because of our preference for the written word."[41] As earlier noted, records that are not externalized, but remain

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[38] See Theodore M. Porter, *The Rise of Statistical Thinking, 1820-1900* (Princeton: Princeton University Press, 1986) and Michel Foucault, *Order of Things: An Archaeology of the Human Sciences* (New York" Vintage, 1994).

[39] Dandeker, *Surveillance, Power, and Modernity*; Foucault, *Discipline and Punish*.

[40] Harry Hammitt, "The Privileged Few," *Government Technology*, December 1998: 26.

[41] Richard E. Barry, "The Changing Workplace and the Nature of the Record," unpublished paper downloaded from http://www.rbarry.com/ACA-PV16?ACA-PV16.html 4/6/99. p. 7.

only in someone's memory, constitute a power source for that person--and they also constitute a loss of accountability by that person as far as the public is concerned. Yet employees of at least Mississippi state government have no legal expectation of privacy in the performance of their official duties. In other words, official acts mediated by telephone cannot be considered private in many governmental jurisdictions, but have in effect been treated as such, probably at least partly because of the imperfect "regulability" of voice telecommunications technology.[42]

The decision to destroy records deemed unworthy of preservation is never "objective," either. Duranti points out that in a post-custodial environment, where records management activities are entrusted to the same people who generated the records, the preservation of records is handed over to *those who are accountable through those same records*, which amounts at best to a conflict of interest and destroys the necessary requirements of transparency, security, and stability.[43] Further, unless access is centralized in some way, the public must bear the burden of uncovering the existence of records in order to exercise its right of oversight. Such a practice also confounds the wisdom of the U.S. Constitution, which depended upon the checks and balances of powerful interests within the government to keep each branch honest--and hence did not assume perfect trustworthiness on the part of any one branch.

Eastwood also points to the kinds of accountability for which archival institutions are thought to be crucial: organizational, public, and historical, maintaining that the two latter kinds are those for which archival institutions themselves are accountable. What is not really detailed in any of this is precisely the *accountability of the archives for its own work*. Archival institutions, as parts of bureaucratic governments, have their own problems of conflict of interest. Archives are usually considered to be accountable to the future, but since they have existed in the past and do operate in the present, their accountability in those contexts cannot be ignored. The historically-constructed governance of an archives may also make it vulnerable to external agendas.

No archives is without a history of creation and emergence in a context of political power; most state archives in the U.S. saw their beginnings as modest offices where legislative and possibly judicial and land records were kept, and the importance of those records as the foundation of economic and political power is such that any archives that is deprived of the custody of one or more of these finds itself today seriously crippled as a source of authority. Original land records from the territorial and early statehood periods of Mississippi history, for example, are kept by the Office of the Secretary of State, not the Archives, and sporadic attempts by the Mississippi Archives to obtain the original records for safekeeping have been politely and persistently rebuffed. If archives function with respect to the past as a means of memorializing the status quo, preserving it as a model for future action, then in a legal tradition that favors precedent this crucial function guarantees power to whatever entity possesses the records relevant to establishing precedent. If that entity is not the archives, then an important--perhaps the most important--source of authority is missing.

Archives must also function in the present, and as agencies of bureaucratic government they are required to scramble just as gracelessly for funding as any other agency, hence they find themselves politically accountable, a very invidious position for an archives. Archives are also legally accountable in certain external compliance regimes, which helps to balance the political liability. Finally, archives have to answer to the public in the present, both in terms of

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[42] Lessig has addressed the issue of expectation of regulability in *Code and other Laws of Cyberspace,* where he argues that we should consider whether freedoms that existed by default, in the absence of ability to surveil in any practical or affordable way, are freedoms that should be preserved when it becomes simple and cheap to carry out surveillance. I would add that we should distinguish in this as in everything else between the freedom of the citizen and the freedom of the citizens' servants.

[43] Duranti, ibid., 251.

preserving records important to the foundation of rights and laws and of providing access to those records. Historically, news media and legal researchers have most effectively proxied for the public in demanding expansion of access.

Archives must finally look toward the future. In that respect they are accountable to the bureaucracy itself to preserve the records crucial to its reproduction. They are also accountable to the public as a repository of common identity, not a task without its own risks as different groups strive to preserve their own stories in their own way. Finally--and to archives most nobly (probably because of their own roots in the field), archives are responsible to future historians who will evaluate the decisions and actions of government in the past; in spite of Jenkinson's inveighing against it, no archivist can realistically be assumed to be unaware that s/he is shaping the historical record, and no archivist should assume that any action taken within the archives is without meaning in that process.[44]

To do all of these things, to be permitted to do these things, archives must also be repositories of power. Without political and bureaucratic power, archives cannot defend the records in their custody against those who would alter them and thus cannot guarantee their authenticity. Archives that relinquish the task of custodianship ironically give away the major source of their power: it is from the recursive power of authentication, best served by custody, that archival institutions draw their own authority.[45] And archival authority is required by government to bolster its own legitimacy. The "files" of bureaucratic government themselves are crucial to the continuation of government in several respects. Without them governmental legitimacy can be questioned. Without them the lessons of the past are lost. And without them the tradition of surveillance and discipline, embedded in the records embodying informational value preserved by archives, cannot be perpetuated. Archives, then, in a sense capture the agency embodied in the records they preserve, and they partake to an extent of that power. [46]

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[44] Keeping hands off, as Jenkinson recommends, also shapes the record.

[45] See Terry Eastwood, "Should Creating Agencies Keep Electronic Records Indefinitely?" *Archives and Manuscripts* 24(2): 256-67.

[46] For the notion of "capture of agency" see Andrew Pickering, *The Mangle of Practice: Time, Agency, and Science* (Chicago: University of Chicago Press, 1995): Pickering introduces the notion of science capturing "material agency" by harnessing the forces of nature in machines; I borrow the metaphor here to formulate the generalization that governmental records represent stored governmental power, a kind of bureaucratic battery.

Silberman's *Cages of Reason* and bureaucratization of the modern American state

In an attempt to understand how modern bureaucratic administrative structures relate to the nation-states with which they are associated, and whether they do so systematically, Bernard Silberman has studied the historical emergence of a rationalizing state bureaucracy in France, Japan, the US, and Great Britain.[47] He argues that "Bureaucratic rationalization was a function of the problems raised by the redefinition of the public and political in the late eighteenth and early nineteenth centuries."[48] As a result, there is systematic variation in the form of bureaucratic structure that a nation-state will generate, depending upon two variables:

1) the certainty or uncertainty of political leadership succession (where "certainty" is defined in terms of the existence of established rules that permit the prediction of outcomes) , and
2) the dominance of leadership accountability by party structures or patronage networks.

Weberian rationalization is a means of reducing uncertainty and risk in the face of the mounting complexity of human relations within large urbanized populations, and this is done by means of a *reduction of complexity*. The fever of classification and ordering that emerged from the thinking of the Enlightenment served to permit control and surveillance by simplifying (and making enumerable or "digital") the set of responses to given problems. But this tendency toward rigid classification, as Silberman shows, was modulated in the emergence of rational bureaucracies by the *realpolitik* of human relationships, through direct personal patronage or party solidarities. The interaction of these two tendencies, Silberman found, explained the emergence of two "styles" or "role systems," both of them dependent upon the means of qualification for the occupancy of bureaucratic office: organizational and professional.

Organizational orientation "is characterized by the presence of rules governing the criteria for higher offices that stress entry into the organizational career prior to appointment to office":[49] specific university courses designed to train for civil service must be completed and specific examinations passed. In return for this early commitment to an administrative career, successful candidates are guaranteed a predictable career, stressing seniority for promotion, for which only they are eligible. As their careers develop, they accumulate knowledge internal to the bureaucracy, making it less likely that they will shift even from one department to another. Silberman points out that such features make an organizationally-oriented bureaucracy, like those of France and Japan, relatively impervious to non-bureaucratic intervention.

Professional orientation, on the other hand, "is characterized by the rule that professional or preprofessional training (not necessarily directly related to assuming bureaucratic roles) is the primary criterion for holding higher administrative office":[50] candidates establish a professional orientation apart from the bureaucratic role. This source of status and achievement, coupled with an ideal of public service, leads to autonomous self-regulation and externally-determined status. Qualified professionals have already assimilated an externally-defined body of knowledge and set of performance norms that make them valuable outside of government, which means that their career structures are less systematic and seniority-based, while organizational definition of rules and norms is less necessary. Silberman points out here

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[47] Bernard S. Silberman, *Cages of Reason: The Rise of the Rational State in France, Japan, the United States, and Great Britain* (Chicago: University of Chicago Press, 1993).
[48] Ibid., xi.
[49] Ibid., 10.
[50] Ibid., 12.

that the features of a professionally-oriented bureaucracy, like those of Great Britain and the U.S., make it highly permeable, since the same bureaucratic role is suitable for public and private organizations.

Silberman found that "political contestation and reform" were the central features of the process of bureaucratic rationalization in Great Britain and the U.S. at the end of the nineteenth century and beginning of the twentieth, as the institutional norm of equality was spread via the application of the notion of contract from the economic to the political realm.[51] He argues that political parties arise as an attempt to reduce the uncertainty of voter behavior, using patronage to control administrative posts and thus to deliver on their promises through government decision-making. But patronage can lose its effectiveness during periods in which the electorate is expanded to bring in new groups.[52] The solution to retaining voter loyalty while also retaining power seems to be the removal of many issues from voter choice by in a sense professionalizing them, making them subject to judgments of "truth" and "efficiency." In other words, the institutionalization of professional expertise as both the qualification for appointment and the source of rules for decision-making, together (crucially) with a set of rules spelling out the accountability of administrators to elected officials, is substituted for patronage in a process of "reform" that actually serves to diminish the direct influence of the electorate. As will be seen, this process has been widespread in US state governments, but everywhere the electorate and special interests have selectively resisted it.

U.S. bureaucratic practice has indeed been strongly affected historically by personal patronage and reforms to combat it. The choice of professionalization as the means of rationalization has had the effect of breaking up the various segments of administration into separate professional fiefdoms incapable as a whole of resisting the power of elected officials, thus dethroning the bureaucratic organization itself as the repository of expertise. Further, although both British and American bureaucrats are trained as professionals, British administrators tend to be generalists who seek their careers more exclusively within the bureaucracy than do American administrators, who have more specialized subject-area education and tend to move more frequently from private to public sector and back again. Silberman's findings therefore suggest that given its electoral system, a "perfectly rational" bureaucracy is not likely in a U.S. government at any level. They also suggest that there will be a tension between the professional autonomy of bureaucratic elites and the distributive outcomes promised by elected officials to their constituencies, unless those officials and their bureaucratic colleagues share certain common values of profession or education. Although Silberman does not address the issue of recordkeeping, it is possible, on the basis of his analysis, to predict four salient features of recordkeeping that should be found with this form of bureaucracy.

1) If employees in U.S. and British "professional" bureaucracies owe their loyalties to professional bodies and associations outside the bureaucracy, we may conclude that *the most careful and rule-bound recordkeeping will be that which is governed by external professional standards* and thereby reinforced by external rewards and punishments (e.g., legal briefs; medical cases; museum catalogs; computer system designs). Recordkeeping that is not explicitly governed by various professional standards, especially in the absence of written policies and procedures, will be dependent upon the choices of relatively autonomous bureaucrats.

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[51] Ibid., 39, 44-47.
[52] In the U.S. case for the period of interest, immigrants, blacks, and women.

2) Because U.S. bureaucrats' professionally-preferred recordkeeping practices are externally regulated and their qualifications grant them a large degree of power and departmental and individual autonomy at the higher levels of the bureaucracy, *it will be difficult to impose a recordkeeping regime from the outside without their willing cooperation*.

3) Silberman's contrast between U.S. "in-and-outer" and British career civil servant career tracks points to the *frequency of turnover in American government as another source of potential trouble in recordkeeping*. If the average tenure of an elected official or politically-appointed agency head is less than ten years, or less than five, it is clear that the common rule-of-thumb use of retention periods for permanent records longer than such a periodicity can have sad consequences: by the time records managers are ready to check on the transmission of the scheduled records to the archives, everyone who knew anything about them may be gone.

4) Finally, the fact that U.S. bureaucrats do move regularly between government and the private sector means that they are likely to bring private-sector habits with them into government. If that is the case, *recordkeeping can be affected by the standard practice in the private sector of destroying as soon as possible all records not actually in use, in order to limit possible liability*. This practice, of course, conflicts seriously with the ideal of public accountability. And, as Schellenberg very cogently observed, this effect is likely to be worst for just those records-- those connected with decision-making--that have the greatest archival value.[53]

As a result of the recordkeeping practices (or lack of them) that this research suggests are "natural" to the role structures of American government administrators, American governmental recordkeeping can be expected to exhibit some rather disturbing features. Formal recordkeeping procedures will only be seriously observed for specific kinds of files: so-called "vital records" of serious portent to the continued existence of the agency or institution, records whose preservation is explicitly mandated by law, and records whose form and treatment are dictated by professional concerns and standards outside of the institution. Many of the most important records pertaining to decision-making processes will not be preserved, may be explicitly exempted from preservation by law, and may even be intentionally destroyed. Only certain departments of the Federal government seem to keep European-style registers of every paper that flows with any consistency; this is the exception rather than the rule in most state governments, where recordkeeping is frequently used more for surveillance of low-level workers than as fulfillment of a legal charge.[54] This is not, however, some kind of evil conspiracy; it stems from the patchwork nature of state government bureaucracies.

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[53] See Schellenberg, *Modern Archives*, 38-39. In fact, in the common practice of not preserving anything except final, "effective" drafts of documents, American archival practice seems to guarantee that the decision-making process will take place in secret--which would also be predicted by Silberman's study.
[54] Margaret Hedstrom, consulting for the state of Nevada on electronic records, was appalled to find the minimal level of regulation of recordkeeping that is common in state government departments: see Margaret Hedstrom, *Management and Preservation of Nevada's Electronic Public Records* (Carson City: Nevada State Library and Archives, 1990). Such observations could be multiplied many times when academic archivists encounter the confused reality of state government recordkeeping.

State government rationalization: The Mississippi example

If American bureaucratic rationalization is constrained in the ways we have seen at the national level, it is reasonable to assume that the same processes may be going on at the state level. In fact the rationalizing, bureaucratizing process has been even more halting and uneven in state governments than it has been at the national level, and for the same complex political reasons. Mississippi state government, not surprisingly, has been no exception to this. As several commentators have noticed, Mississippi state government has steadily grown, both in number of functions provided to the electorate and in absolute number of employees from eight administrative agencies at statehood in 1817 (seven of them constitutionally established and six of those constituting the offices of the primary executives of state government) to a maximum of 210 in 1976, although this latter number obscures the fact that 90% of Mississippi state government expenditures went to only twelve agencies at that time, all of them created since 1817 to provide commercial infrastructure or social services and all but one created since 1930.[55] In 1997 our studies showed that there were 142 agencies, boards, and commissions receiving appropriations, the reduction in numbers being all there is to show for some sixty years of reorganization efforts. The history of modern Mississippi government has in fact been marked by no fewer than five conscious efforts at reorganization for the purpose of achieving a hierarchical bureaucratic structure. The first three of these were studied in detail in 1978 by Thomas Kynerd, and I will draw here from his work.[56]

Early reorganization efforts: Taft Commission, Brookings Institution

At its beginning, Mississippi state government provided a kind of constitutional governmentality modeled upon the national structure, with a governor and lieutenant governor to see to carrying out the wishes of the people as manifested through a bicameral legislature, a secretary of state to see to matters of landholding, an auditor and treasurer to deal with government monies, and an attorney general to attend to the state's legal affairs before an elected judiciary. After the Civil War, industrial and other growth promoted largely unregulated expansion in all state governments: state government departments were simply created ad hoc as specific services were demanded by the electorate and as those demands were met through patronage politics. In the wake of the report of the 1912 Taft Commission on Economy and Efficiency in the national government, which as we have seen had a profound effect on recordkeeping decentralization and the adoption of new technologies at the national level, reorganization efforts began in the states. Illinois began the trend in 1917, but the process went on into early 1930s. The general principles of this reorganization trend were to move closer to the bureaucratic ideal by eliminating several sources of preferential influence, more strictly defining functions, and establishing accountability. Steps taken aimed at achieving a strictly hierarchical structure under the firm control of the governor:

- Concentrate authority and responsibility
- Departmentalize related functions

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[55] Robert B. Highsaw and Carl D. Mullican, Jr., *The Growth of State Administration in Mississippi* (State Administration Series 10, Bureau of Public Administration, University of Mississippi, 1950), Table II, p. 31; Thomas E. Kynerd*, Administrative Reorganization of Mississippi Government: A Study in Politics* (Jackson: University Press of Mississippi, 1978), Table 23, p. 158. For FY1999 agencies and figures, see Table 1.

[56] Kynerd's excellent political study (ibid.) was drawn upon for the following account down to 1977.

- Avoid the use of boards for purely administrative work
- Coordinate staff services
- Provide for an independent audit
- Provide for a governor's cabinet[57]

The Weberian nature of these principles is obvious, and it is easy to see why reformers thought the task would be a simple technical fix. But as Silberman has pointed out, economy and efficiency were not the only things at issue here: the unmentioned "distribution of power" made reform more difficult than it seemed at the outset. In the different states efforts toward change varied on two axes: they attempted to reach these goals by piecemeal changes in some places, sweeping changes in others; and they used either legislative or constitutional strategies. Gubernatorial leadership was no guarantee of success, but gubernatorial persistence and the use of reorganization as a campaign issue were the two significant means for achieving success in this first period of reform.[58] The states of affairs requiring reform benefitted powerful people, and they could be counted upon to oppose reform, just as was the case at the national level.

The story in Mississippi showed how crucial this was. With the state's history of being deep in debt for many years, Governor Bilbo had in 1916 called for a survey of the problem by a joint committee that reported in 1918, but no steps were taken to follow it up. Even deeper in debt in the wake of the 1929 stock market crash, the legislature finally created in 1930 a Research Commission of 25 white business and professional people (23 men, 2 women) to investigate, study, and analyze "all conditions in the state." In 1931 the Commission hired "an outstanding experienced, non-commercial, non-partisan" research group, the Institute for Government Research of the Brookings Institution, to analyze governmental administration, especially financial. The Brookings Institution report included 435 pages on financial administration alone, but devoted 179 pages to state government reorganization, arguing that general reorganization would be crucial to gaining control of the state's finances.[59] At the time, the state had 80 agencies: 10 constitutional, 70 legislated. The heads of these agencies served many masters:

> 23 appointed by governor (most with boards/commissions also so appointed)
> 10 appointed by governor with Senate approval (most with boards/commissions
> also governor-appointed)
> 19 ex officio
> 14 elected
> 6 other

The Brookings report called this chaos, and recommended reorganization to reduce the number of agencies and rationalize their governance, following three principles: group related services, make the governor the real head of administration, and emphasize a hierarchical bureaucratic organization with a single accountable head for each department rather than boards and commissions. The report proposed twelve departments, seven made by consolidation, four

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[57] A.E. Buck, *The Reorganization of State Governments in the United States* (New York: Columbia University Press, 1938).

[58] Kynerd, ibid., 15.

[59] Brookings Institution, *Report on a Survey of the Organization and Administration of State and County Government in Mississippi* (Jackson: Research Commission of the State of Mississippi, 1932). The state government reorganization segment of the report is found on pp. 439-618. The report also recommended a thoroughgoing reorganization of county government along the same lines: pp. 621-874.

remaining as they were, and one (a Department of Local Government) created de novo to handle the state's relations with local governments. Significantly, however, the state had not raised enough money to permit the study to include "a specific code of suggestions, conclusions and statutes..."[60] The report called for 98 specific actions, only nine of them administrative; thirteen would require constitutional change, while fully 76 would have to be statutory.

Newly-elected Governor Conner discussed reorganization in his inaugural speech and presented the plan; but the legislature's attention for that session was focused on a fight over sales tax--to become the greatest accomplishment of Conner's term--and though a Reorganization Committee was created, it did nothing before the adjournment of the legislature. The only significant "piecemeal" effort, to create a single Highway Department director, failed after a huge fight. Attempts to get support for a constitutional convention during 1933, called for by the Reorganization Committee and endorsed by the governor, failed; the opposition claimed that the Brookings report would set up the governor as a "dictator." In 1934 Conner tried again with the legislature, but was opposed by county supervisors and the Highway Department, both afraid of losing political patronage power. At the time, the Highway Department had more money than all other departments, and each of the three commissioners occupied his own fiefdom; it was alleged in the popular press that 51 legislators were literally in its pay directly or indirectly. In addition, legislative fears of reapportionment (and resultant loss of patronage power) may also have caused the ultimate defeat of the move for a constitutional convention. By the end of Conner's term, the whole effort had been defeated because both government centralization and state-level appointment of county officials were strenuously opposed by power brokers (referred to by Conner in his retiring speech as parasites and "political termites").[61]

Postwar reorganization: Hoover Commission

In 1948-52, after World War II and in response to the national Hoover Commission for Organization of the Executive Branch of Government, about 25 states attempted once more to achieve enhanced rationalization and to assimilate the organizational lessons that had won the war, and about two-thirds of these succeeded. One observer enumerated strategies leading to success, including:

- Both the legislature and the public need to be convinced
- Elective offices, too entrenched to be done away with, should not be abolished
- The plan should seem home-grown, not the product of out-of-state "experts"
- The governor and legislature must agree
- Cooperation, consultation, and compromise are essential[62]

A 1955 analysis of the failures encountered in the states during this spell of reorganization pointed to the sources of resistance that stood in the way of rationalization. This textbook list clearly reveals the centers of power involved in the struggle, all jockeying to maintain or obtain power and influence: governors, legislators, voters and their interest groups, and agencies themselves:

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[60] Ibid., 8.
[61] Ibid., 60.
[62] These points were made in Robert E. Riggs' study, *The Movement for Administrative Reorganization in Arizona* (Tucson: University of Arizona Press, 1964); summarized in Kynerd, ibid., pp. 18-19.

- Agencies prefer maximum autonomy
- Voters fear strong administrators and oppose appointed agency heads
- Legislators oppose increasing the power of the governor
- Scandals encourage separatism, which is claimed to keep agencies "above politics"
- Professional and other interest groups prefer separate agencies
- Federal grants discourage consolidation[63]

Again Mississippi joined in the effort at reorganization with its own "little Hoover Commission," beginning in 1950 under the initiative of Governor Fielding Wright. During and immediately after the war, from 1944-48, more than 12 new agencies had been created, bringing the total now to 103. From 1947-50, seven publications from the University of Mississippi's new Bureau of Public Administration had offered analysis and proposals, especially a 1950 study by Robert Highsaw and Carl Mullican, *The Growth of State Administration in Mississippi.*[64] The study called for a recess legislative committee to come up with a comprehensive plan, and the legislature obliged by creating a Reorganization Committee with $40,000 to spend, which Highsaw served as a consultant.

The Committee divided government functions into nine groups previously outlined by Highsaw and Mullican, including general government, protection to persons and property, highways and transportation, conservation and recreation, health and sanitation, hospitals and institutions, charities and correction, education, and libraries. Subcommittees investigated these functions' distribution throughout existing agencies, creating subcommittee reports first released to the press and then combined into the final report. The report found state organization in 1950 virtually the same as in 1930, with the same failings. But the number of agencies had increased 25% through a rather complex process: of the 80 agencies existing in 1930, 21 had been abolished or consolidated, while 41 new ones had been created, all of them except Institutions of Higher Learning through statute. The "chaos" observed by the Brookings report still reigned, since agency heads still owed their appointment to a variety of sources:

     24 appointed by governor
     12 appointed by governor with senate approval
     40 wholly or partly ex officio
     13 elected
     11 other

Furthermore, serious administrative problems still plagued state government. The report outlined a number of them that could be addressed by improved organization:

- State finances were still wobbly
- No statewide personnel system existed
- No statewide purchasing system existed
- Unrelated functions were grouped, while related ones were scattered
- An even larger number of independent agencies existed
- Because of the extensive use of the "long ballot" at the state level, with many elected agency heads and commissions, it was hard for voters to evaluate candidates and thereby assure their qualifications

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[63] York Willbern, "Administration in State Givernments," in *The Forty-Eight States: Their Tasks as Policy-Makers and Administrators* (Columbia University: The American Assembly, 1955); summarized in Kynerd, ibid., p. 20.
[64] Highsaw and Mullican, ibid.

- The governor was still administratively weak, since his ca. 250 appointments did not include the most powerful agency heads, and he lacked the power to remove most of those he did appoint
- Extensive use was made of the ex officio method for populating boards and commissions
- Excessive variability and complexity of agency organization existed

The Committee recommended four main principles of reorganization. First, they favored a departmental system. Second, they recommended that boards and commissions be limited to policy, while the administrative staffs would implement it. Third, all agencies would make use of a single administrative bureau, placed in the governor's executive office, to attend to budgeting, accounting, purchasing, and personnel. Finally, the governor would have greater power. The Committee proposed 17 departments, 16 with boards (of which 15 would be appointed by the governor), whose heads would be appointed by him also from board recommendation and removable by him for cause. Seven elected officials would head their own offices, as would an Auditor appointed by the legislature, which would also appoint an ex officio Board of Election Commissioners. The Executive Office of the Governor would be a bureau of central administration consisting of 14 existing agencies.

Public releases of the reports of the Committee were praised, but the increased powers allotted to the governor under the plan and the recommended changes of highway commissioners and other elective officials to appointive (commissions would set policy, but execution would be in the hands of a technically-qualified administrator) raised the usual cries of "dictatorship" from supporters and cronies of the affected agencies, and even the governor reportedly opposed making so many positions appointive. The Committee finished its report on December 15, 1950, and called for a special session as promised, but Wright--statutorily unable to succeed himself but presumably looking toward a future run for governor--ignored the call, even though the final report restored election for highway commissioners. Other lame-duck issues, plus elections in 1951, left the plan in limbo. Opposition was most widespread from elected officials. The response of the agencies themselves was predictable: all said reorganization was much-needed, but not of course of their agency--and in fact some changes were made to the plan by the Committee under pressure from some agencies. But what probably defeated the plan was Wright's own opposition to abolition of the long ballot and--surprisingly--to giving the governor more administrative power!

Kynerd observed drily and rather circumspectly: "...a common factor in the unsuccessful attempts has been that the tendencies to propose the most desirable organization from a theoretical standpoint are not balanced with proper consideration for political practicalities."[65] In addition, no real effort was made to build public support; and in 1951 there was a surplus in the treasury, making economy a poor argument. Hugh White in 1952 simply pointed to the report and suggested that the legislature consider it, but in 1952 no bill made it out of committee. In 1954 White supported reorganization for economy, with no better results. Most aims of the reorganization were completely ignored, but a few did go forward. In 1952 a state retirement system was set up, making a state service career more attractive. In 1962 agencies were required to submit their budgeting of special fund monies for legislative approval. But hierarchical bureaucratic organization was not standardized across departments, and rationalization was still far behind what had been done in other states.

"Umbrella" movement in the 1960s and 1970s

In the late 1960s, some 16 states continued reorganization efforts. The trend here was toward reorganization for economy and efficiency reasons, creating fewer departments by

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[65] Ibid., 87. A useful watchword for electronic records programs.

means of "umbrella" consolidations (original departments would be left intact under the "umbrella") and calling for systematic planning, but leaving elected officials and boards and commissions in place. In Mississippi, the 1964-65 Hooker Committee that was established to study salaries and duties of employees led to the creation in 1970 of the Mississippi Classification Commission--to be answerable to the legislature--to set up testing and salary scales to bring rational definition to job descriptions.

A more formal effort was initiated by Governor John Bell Williams in 1969, as he tried to mobilize the extragovernmental power of 93 Mississippi CEOs in the Mississippi Task Force on Government Efficiency and Economy--thus also reflecting the perception that government should be run and structured like business. The executives' final report mostly stressed organization. They of course lamented the large number of overlapping independent agencies, since although 11 agencies had been abolished since 1950, 26 new ones had been created. They called for overall systematic planning and budgeting. They cited the need for uniform policies and procedures for personnel, finance, purchasing, and management control in agencies, the achievement of which was to be made possible through increased use of information technology. Proposed principles for reorganization included:

- All functions must be evaluated before elimination
- Duplication must be avoided, clear lines of authority established
- Limit number of activities controlled by one supervisor
- Consolidate related functions and activities where possible
- Use IT as a management tool for decision-making in planning and management
- Administrative structure needs to be flexible to accommodate change
- Program planning for related functions must be coordinated
- Budget proposals must aim at documented objectives
- The governor needs specialized staff assistants

In the proposals, restructuring of organizational relationships represented most of the substance: 112 agencies were to be reduced to 32, all to be in the executive branch. In 1971 Governor John Bell Williams introduced the results of the Commission's work. He asked for the reorganization to take place by the "umbrella" method so that agencies wouldn't be disturbed, only grouped initially, becoming amalgamated and therefore better-supervised over time. Since 1971 was the first annual 90-day session of the legislature, and since it was an election year, nothing was done. Incoming Governor Waller supported reorganization, but recommended starting small; in the end, all Waller was able to do during his tenure was keep the issue alive. Hence in 1975 reorganization was a prime election issue.

When Cliff Finch was elected, he claimed to support reorganization. The legislature's Performance Evaluation and Expenditure Review Committee (PEER) proposed a plan, and the legislature attempted to create a another study, but all efforts died in the 1976 session. Worries about job losses due to agency consolidation followed by staff reductions through attrition led SEAM, representing state employees, to request better job security for state employees in 1977; that this argument was listened to reflects both the increasing professionalization of state agencies and their increasing size, such that the absolute number of state employees and their relatives represented a significant voting bloc. PEER's predecessor, the Legislative Audit Committee, had proposed a sunset law in 1974, under which every agency would requalify every four years, and this law, modified to require the examination of 70 agencies by 1982, was passed in 1978 over Finch's veto. Moving in tandem with this issue was the concern to strengthen the position of the executive by conflict of interest and separation of powers lawsuits brought by Senator Theodore Smith in 1974, the Mississippi Constitutional Defense Fund in 1976, and threatened by Attorney General Bill Allain in 1981. These efforts aimed at restoring

the constitutional separation of powers preventing legislators from serving on boards and commissions, a practice that had touched many of the most powerful agencies, including the Budget Commission, Personnel Board, Board of Economic Development, Medicaid Commission, and (importantly for our concerns here) the Central Data Processing Authority. Agency reviews under the sunset law, however, had little effect: many of the entities reviewed turned out to be defunct already, only a few very small entities were eliminated, and the larger and more powerful agencies remained intact.

More recent studies and reorganization efforts

In 1979 a management efficiency study was carried out by the Arthur Young firm[66] at the instigation of the senate Finance committee. The study was carried out during the last year of Cliff Finch's term, with implementation under his successor, William Winter, though it was restricted to Mental Health, Board of Health, Public Welfare, Motor Vehicle Comptroller, Forestry Commission, Vo-tech Education, Budget and Accounting, Auditor, Classification Commission, and Central Data Processing Authority. One of the most significant efforts here was the replacement of the old Budget Commission by a new Department of Finance and Administration.

This round of reorganization also included a major effort to transform the Classification Commission, which had handled all personnel matters for state agencies, into the new State Personnel Board (as of 1981) to meet guidelines from the Federal Civil Service Commission, Department of Justice, Equal Employment Opportunity Commission, and Department of Labor regarding merit principles: "It is clear that the Mississippi Classification Commission's recruitment and selection and classification and compensation systems do not meet these requirements," the Arthur Young report observed.[67] The Commission had allocated 2000 classes for some 26,000 positions, and job titles were inconsistently applied by agency personnel officers, many of whom were unqualified. Positions with state government were not publicly advertised, did not require uniform testing, and were often filled before the hiree exhibited qualification. Pay increases did not depend upon uniform evaluation methods. There was no overall organizational chart for state government, and personnel records were so poorly maintained that the study noticed that fact.[68] Aside from the fact of massive reorganization to meet requirements for fair employment practices, the implications of these findings for the quality of recordkeeping and the motivation to do it properly are obvious.

The major thrust of all these efforts--as indeed of all previous efforts--was that for the governor to be a better administrator, the legislature would have to part with some of its power. In 1984, a Government Reorganization Act under Allain's governorship removed legislators from boards and commissions, transferred Medicaid to the Governor's office, and combined three commissions into an Office of General Services, thus increasing executive power measurably. The legislature struck back by creating a powerful Legislative Budget Office, which was empowered to review and make recommendations regarding agency budgets each year.

During the later 1980s, several additional efforts were made toward reorganization, and under the demands of federal law some of them were actually successful in amalgamating functions. It is not possible to evaluate them fully, however, because a good deal of the documentation that would permit this is still in agencies, was carried off by officials and subsequently given to other institutions, remains in the State Records Center because its

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[66] This effort at management reorganization is reported in Arthur Young and MGT of America, *Management Review and Implementation Program, Final Report Volume 1* (State of Mississippi Commission of Budget and Accounting, 1980).

[67] Ibid., 72.

[68] Ibid., 76.

retention period was excessively long, or is lost and is thus not available in the Archives. Significantly, it should be observed, Kynerd's study depended in large part upon personal interviews with legislators and newspaper reports, making almost no use of archival materials; the same problems are still evident in an attempt to deal with activities of elected officials since then, in spite of creation of the Records Management program at the Department of Archives and History in 1981. Some evidence has, however, been gathered through indirect means and the inspection of unprocessed archival materials, which have permitted us to collect documentation underlying another major reorganization effort.

In 1988 an Executive Branch Reorganization Study Commission was appointed by Governor Ray Mabus pursuant to Senate Bill 2260.[69] This group consisted of 24 members including three state senators, three representatives, and eighteen private citizens, most of them in business or professional life and eight of them women; the group was staffed by the management-research firm MGT of America. Having examined all the earlier studies of state government structure and their results, the Commission proposed another "umbrella"-style reorganization, in the course of which those of the 150 existing agencies not headed by elected officials would be grouped into 12 umbrella departments; in addition, some of the old agencies would be placed under the seven agencies headed by elected officials. The aim of this proposed reorganization was to mend the "duplicative, unaccountable, and inefficient" features of the executive branch of state government, with which Mabus as the former State Auditor was well-acquainted. The Commission reckoned that its 160 major findings, if implemented, would save the state $60 million per year.

This reorganization plan did not survive political reality intact. The plan was presented to the 1989 legislature. Agencies fought tooth and nail to preserve their stand-alone status, and the plan was much modified even before it was presented to the legislature, emerging rather more as an "umbrella"-style plan than a radical reorganization. The Department of Archives and History, first intended to be placed under the Office of the Secretary of State, was eventually proposed to be placed under an umbrella "Department of Cultural Affairs" with the Library Commission, the Arts Commission, and Educational Television--then that particular umbrella was folded up and put away entirely. But in the end several major changes were made in 1990 and 1991 in the direction of consolidation and reduction of redundancy in functions. Though Mabus's reorganization effort was the most effective in the history of the state from the point of view of bureaucratic rationalization, he was not reelected.

Though Kynerd's study covered events only to 1978, and no such complete study exists for events since that time, his final comments seem to be applicable to subsequent efforts as well. He found that in Mississippi gubernatorial leadership has been most crucial in the success or failure of such efforts, but that the power of the governor was not sufficient to go it alone: it required the support of the public, the media, and especially the legislature. The issue had to be kept before the public, the governor had to actually do his homework and see that legislation--on the advice of home-grown experts--was prepared for action. That legislation could not propose drastic change (or much threaten entrenched interests), and parties to the change had to be willing to compromise. Finally, the luck of timing had to meet with the wisdom of strategy to achieve meaningful change.[70] The fact that all of these factors never came together strongly enough to achieve sweeping change explains why Mississippi state government is not now anything like a perfectly rationalized bureaucracy.

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[69] This reorganization is reported in *Reorganization of the Executive Branch of Mississippi's State Government*, by Executive Branch Reorganization Study Commission, 1988.
[70] Kynerd, ibid., 145.

Kynerd also observed--in line with Silberman's conclusions about expansion of the electorate at the national level promoting reorganization that would take direct voter input out of the management of government--that the anticipated effects of the Voting Rights Act in Mississippi so seriously raised the spectre of loss of power by the white elite that the legislature was finally willing to strengthen the power of the governor to which they had so long been opposed, on the principle that it was unlikely that a "new guard" governor would be elected. A more powerful Old Guard governor would then keep a tight rein on spending for social programs that might be proposed as power shifts took place in the legislature.[71]

Significantly for our purposes, Kynerd pointed out that to achieve bureaucratic efficiency, a focus on budgets rather than agency numbers would have been more fruitful to reform efforts, since as of 1977 only 12 agencies (of 210) accounted for 90% of the state budget. Concentrating on reducing numbers, he felt, only allowed many of these bigger agencies to escape serious review, when in fact the number of agencies is not nearly so serious a problem as streamlining of planning, budgeting, personnel, and purchasing--in other words, bureaucratization.

Mississippi government rationalization and recordkeeping

The study of this series of efforts reveals that perfect rationalization in Mississippi state government (as in most other state governments, even when their rationalization efforts have been more successful) has been materially hindered by power struggles between governor and legislature as well as agencies' external attachments to businesses, interest groups, and political power sources (especially the legislature itself). Many agencies are literal hostage to the struggle between the governor and legislature for power. And agencies headed by elected officials, who thereby have accrued their own autonomous power, are frequently able to make their own rules and resist reorganization altogether. This story is also one of control over money and accountability for the management of that money. Mississippi's small tax base has made it a poor state in the sense that its state government has had few resources to provide services to the vast majority of its citizens. Because of this perceived poverty, however, Mississippi has benefitted from federal government social programs meant to aid the poor, as the mass creation of state agencies to handle federal assistance monies in the 1930s, 1940s, and 1960s attest. Perceived inefficiencies and inequalities in the management of these monies have led in more recent years to mandated reorganizations to meet federal requirements.

Where agency functioning is a pawn in power games, agency recordkeeping in certain agencies and at certain levels within agencies will be poorly accountable because, as we have seen, somatically-retained information empowers the person who is the repository of that information--hence records may be destroyed or not kept in the first place, to maintain the secrecy in which the power of the agency bureaucrat or the agency itself lies. In several instances, studies in support of reorganization efforts have commented on such recordkeeping shortcomings. The records that are prone to this problem are some of those that are considered most "archival": those that pertain to decision-making and policy at the highest levels. Schellenberg addressed this issue obliquely when he pointed out how much of this sort of activity takes place face-to-face or on the telephone and has never been amenable to recordkeeping.[72]

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[71] Kynerd, ibid., 150-151. Kynerd's circumspection in laying out this possibility--he points only to the possible fiscal effects--witnesses its controversial nature as late as 1978, when Kynerd was completing his graduate work at the University of Southern Mississippi.

[72] Schellenberg, *Modern Archives*, 38-39.

Perfectly rationalized recordkeeping systems for electronic (and other) records as suggested by both the University of Pittsburgh and University of British Columbia models might serve (if implemented) to enforce and advance a more perfect and perfectly accountable bureaucratization for state governments like Mississippi's. It is unlikely that they could be implemented without considerable reengineering of existing recordkeeping practice, however. The Pittsburgh and UBC models could most readily apply in the more perfectly bureaucratized "surveillance" areas of government devoted to internal order and security, like Public Safety and Corrections. Attempts to mandate such reforms in other agencies, where external power sources and professionalization insulate recordkeepers from bureaucratizing requirements, will meet with the same kind of resistance that has made bureaucratic reform in general so ineffective. That recordkeeping systems have remained unreflective of systematic bureaucratization, however effective state government reorganizations have been, is evidenced in the doleful accounts of recordkeeping standards in various states given by one electronic records consultant after another.

In addition to the four general observations about recordkeeping we have so far amassed through the study of bureaucratization in the American governmental form, presented on pages 16-17, we can now add a few more as a result of this review of state reorganization efforts in Mississippi:

5) *Power and the struggle for it between elements of government will have significant effects on recordkeeping*: This may be particularly significant where records are not archived because their revenue-producing value to an agency is too great (discussed below).

6) *The struggle for equal treatment of citizens under the law, so significant to Mississippi's postbellum history, will also have significant effects on recordkeeping*. Example: Although the Mississippi State Sovereignty Commission files documenting acts of racially-motivated state-sponsored surveillance were preserved, they were compulsorily closed by statute in 1977, a lawsuit was required to bring them to light, and some suspect that they are incomplete.

7) *Records that favor the powerful disproportionately, such as those that secure private property, will be well-preserved, but those that document the dealings of government with the weak and the poor will be less enthusiastically documented--except where those dealings favor and reinforce the claims of the powerful*. Government is in the business of assuring stability and of being most responsive to those who have the power to demand more of it. Records of proper compliance with welfare laws are much harder to find than those that document abuses, since what is "usual" and "normal" tends to be reduced to statistics in bureaucratic and records-management practice, while that which is "deviant" is documented in detail.

8) *The political power of elected officials will make it difficult to compel recordkeeping beyond that demanded by explicit legal requirement.* This will apply equally to any agency or other entity controlled directly or indirectly by elected officials; to the extent that the legislature governs agency funding levels, this principle will apply to nearly all agencies.

The scope of the present project has not permitted the full-scale study of the genealogy of Mississippi state government administration that would provide us with a clear idea of what records should have been kept but were not, what records were kept and are in the hands of the State Archives, and what records were kept and are still in the custody of agencies. Such a study needs to be carried out so that we may learn from the lost chances of the past and thereby arrive at an effective program that manages both paper and electronic records in an efficient and legally adequate way. As archivists we need to recognize that the records of

government embody power and to admit that we ourselves unavoidably help to construct what counts as the official record of state government by managing and collecting it--*and by failing to do so*. For that reason it is important to take a look at what we have been able to do so far, based upon the official publications of the Department in annual reports and specific studies and finding aids produced to assist patrons with access to existing collections That story reflects a history of archival behavior that more or less mirrors the dominant political climate of the day for individual periods.

Archives' role in the historical record of state government: The MDAH example

The Mississippi Department of Archives and history was created in 1902 by Mississippi State Senate Bill No. 26, Chapter 52, Laws of 1902, which states its objects and purposes as follows: "There shall be for the State of Mississippi a department of archives and history. . .and the objects and purposes of said department are the care and custody of official archives, the collecting of materials bearing upon the history of the state and territory included therein, from the earliest times, the editing of official records and other historical material, the diffusion of knowledge in reference to the history and resources of this state, the preparation and publication of annual reports, the encouragement of historical work and research and the performance of such other acts and requirements as may be enjoined by law." The *care and custody of official archives* bears specifically upon the work of preserving the records of government, which by that time had been accumulating for 104 years, but the whole tone of the act is antiquarian. This should not be surprising; there was a national movement on at the time to preserve the sources of the country's early history. Both Mississippi's and Alabama's state archives were created in the same year, in an atmosphere in which these southern states sought to preserve and defend their territorial and antebellum heritage as the veterans of the Civil War were beginning to die off.

From its beginnings the Department was never independent from political influence, in spite of repeated rhetorical claims, and during its pre-1970 history it was at times very closely controlled indeed. Over its history, therefore, the record of Mississippi state government activity that it accumulated and preserved was constructed in a complex dialectic that included--as we would expect--local political demands, national political demands (and incentives), and especially the influence of growing professionalization in academic history and archival science. The role played by its directors in orchestrating these forces was not inconsiderable (several of them held national office in historical and archival professional organizations), and the construction of the record can be fruitfully examined with reference to their terms of office.

Dunbar Rowland: Laying the foundations, 1902-36

In the course of its near century-long history, the Department has had but five directors. Its founding director, Dunbar Rowland, served for more than a third of that time, from 1902 to his death in 1936. Trained originally as an attorney and in legal practice for 13 years before his appointment, his historical interests were strong. He was active in the American Historical Association's urgings for archival efforts at the national level throughout his career, and he had helped Franklin Riley, organizer of the Mississippi Historical Society, and other historians and civic leaders to push in the Mississippi Legislature for the creation of a Mississippi Historical Commission in 1900 to survey the archival needs of the state. Its report led to the 1902 legislation, creating the Department under the control of a self-perpetuating Board of nine Trustees confimed by the state Senate.[73] The original Board was drawn from the membership of the Executive Committee of the Mississippi Historical Society, and five of the nine white men

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[73] Originally the Trustees were to be members of the Executive Committee of the Mississippi Historical Society; in 1906 Board membership was changed to require only that three of them be ex-Confederate soldiers. Rowland observes that the change was made because it "was also considered by the Legislature inadvisable to place a Department of the State government under the auspices of a society over which it could exercise no control." Dunbar Rowland, *Fifth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1907), 17.

appointed were either Civil War veterans themselves or the sons of veterans. Given the architecture of power in the state in 1902 and Rowland's own self-proclaimed "Bourbon" sympathies, it would have been surprising if they were not, but their interests, sympathies, and contacts inevitably had an effect on the preservation of the historical record. The first actions of the Board of Trustees were to resolve to obtain the following modest list of materials:

1) from the United States Government, copies of the official rosters of Mississippi's Confederate army organizations;
2) from newspaper publishers, all newspapers published in the state;
3) from "owners," manuscripts, portraits of "distinguished Mississippians," and artifacts for museum display.

Established in the Old Capitol, the new Department was moved to the new state Capitol Building that was completed in 1903, and was assigned two rooms originally designated for the Clerk of the House and the House Appropriations Committee.

Although official government records were not included in the Board-recommended list, they were clearly a priority for Rowland. He sought out in the antebellum Old Capitol building 50 record boxes of the "archives of the State not in use," which he found to be in "lamentable confusion," but was glad to say that they had not been "deliberately consigned to flames and water."[74] Most of his first annual report was taken up with a history of Mississippi state government records to date and an inventory of the contents of the first five boxes. He traced the itinerary of the records from the Territorial period: from Concord, the Spanish governor's residence; to Natchez (kept in Washington, at Jefferson College to 1819); to Columbia until 1822 or so; then to the "old" capitol building in Jackson (now demolished) until the then "new" capitol building (now the Old Capitol Museum) was completed in 1839. In 1863, as Jackson fell in the Civil War, the records--which included active records--were moved to Meridian, then Enterprise, Columbus, and Macon, being apparently returned to Jackson in 1865. In course of time records not in daily use were shunted to the third floor of the building, where they were simply warehoused in confusion until their weight threatened the Supreme Court chamber below, and they were "sentenced and committed to the penitentiary"[75]--the old penitentiary building in the center of Jackson where the eventual "New Capitol" would stand--from 1896 to 1900, when they were packed in the 50 boxes and stacked in the corridors of the Old Capitol pending construction of the New Capitol. There they apparently remained until Rowland claimed them, and he was not to move them into new quarters until October 5, 1903, when he and the archives were the last to leave the old building and be established in the new. During the course of the first year of the Department of Archives and History Rowland used young women volunteers to help him with his work, but for the second he was authorized to purchase a typewriter and hire a stenographer.

In his first examination of the archives, Rowland found the papers of the territorial and state governors, territorial and state legislative journals, and early state constitutions, which he hastened to put in order and inventory, though the work was at first slow: five boxes in 1902, 15 boxes in 1903, and the remainder completed only when he was able to secure an adequate Hall of Records in the New Capitol, between 1904 and 1912. He determined early that the best means of preservation was to order and bind the records, but the first arrangement of the files was in filing cabinets. His observation of the recordkeeping habits reflected in the official records is instructive: "The territorial archives of Mississippi have, fortunately, been more carefully preserved than those of any other period. The territorial governors, it is evident, were

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[74] Dunbar Rowland, *First Annual Report of the Director of Archives and History* (Jackson, 1902), 15.
[75] Ibid., 18.

industrious and careful, and seem to have had a fondness for keeping executive journals in which were recorded all official correspondences and other writings and proceedings."[76] His remarks with regard to papers since statehood were sparse but telling: from 1817-1839, while there was no fixed seat of government, records endured "considerable loss"; Civil War records he described as showing some damage from marauding Yankees but otherwise "surprisingly complete"; Reconstruction records for 1868-1876 "were not properly preserved," nor were those of 1877-1895--but in these latter two cases Rowland gives no reason.[77] By 1912 he was able to make the claim that due to the existence and influence of the Department (in Rowland's terms, "various kindly suggestions"), state agencies and even county and municipal governments had adopted better recordkeeping practices, but he gives no details.[78]

During the early years of his tenure Rowland was instructed to concentrate significantly on the collection of Confederate records from both the United States government and from private individuals, as explicitly required by the 1902 Act of Establishment of the Department.[79] Rowland's words speak eloquently for his aims: "Perhaps the most pressing duty of the Department," Rowland wrote in 1903," is the preservation of the peerless record of the heroic soldiers of Mississippi who served in the armies of the Confederacy....If there is one duty of this Department which should stand before all others it is that sacred duty to preserve the record of the deeds of the Confederate soldiers of Mississippi who gave up everything for country and made forever heroic the time in which they lived."[80] Rowland was supported in these aims by a board that shared these values: of the first nine men on the board, two were Confederate veterans, three the sons of veterans, one was a participant in the 1876 overthrow of Reconstruction, and two were present at the 1890 Constitutional Convention that provided the underpinnings for Jim Crow. First Rowland had to search out such records as could be found. A master of the dramatic flourish, he presented this search rhetorically as an epic discovery in his official reports, although the Jackson newspaper for that date does not report the discovery.[81] He had been informed by Col. E.E. Baldwin (presented in Rowland's report as the sole possessor of the secret of their location) that the muster rolls and other records had been hidden at the fall of Jackson and left in hiding during Reconstruction and since at the Jackson Masonic lodge, and he and Rowland retrieved them from thence on July 25, 1902.

In order to attract the further interest of the public and their support for funding, Rowland printed in his reports lists of the materials he found. In 1903 he went to Washington to campaign for the printing of the Confederate rosters by the War Department, and succeeded in instigating the printing of both Confederate and Union rosters, since there was judged to be a universal demand by the populace to memorialize the war's participants before they all died. Another motive may also have been present; to quote Rowland in 1912, when the data-

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[76] Dunbar Rowland, *Third Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1905), 23.

[77] Rowland, *Eleventh Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1913*)*, 28-29.

[78] *Eleventh Annual Report*, 30.

[79] In 1905 that requirement would be extended to including the records of Mississippi soldiers in the War of 1812, Indian wars, and the Mexican War. Rowland, *Fifth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1907*)*, 18.

[80] Dunbar Rowland, *Second Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1903), 8-9.

[81] This is true even though it does report other finds being made by Rowland as he sifted through the boxes of papers he had already taken into custody; see the daily Clarion-Ledger for June 26 and the weekly Clarion-Ledger for the same date, which present two Archives-related stories. Interestingly, the June 27 paper prints a letter to the editor suggesting that now that the archives have been safely plucked from the rickety Old Capitol, it would be advisable to tear it down and make the land into a park--a striking reversal of the notion that the place confers power on the archives held within it.

gathering in Washington had nearly been completed, "The historical fact that the Southern States fought against overwhelming odds in their effort to establish an independent nationality is not now a subject of controversy, but it seems to me that we should all be glad to know that the South, of its whole population, sent 1,000,000 men to the front from her rather sparse population, for it shows that *our people were a unit in the great contest*, and that the war between the Northern and Southern States was not a contest brought on by the leaders."[82] Since the Confederate History Commission that was convened in the state to collect materials in private hands and to disseminate a questionnaire to all surviving veterans obviously did not collect information from Union veterans, such a picture of the data is not surprising. In 1905 the Federal War Department returned captured Confederate battle flags to the states as the project to print the rosters got under way.[83] In 1908 Rowland began work on the publication of the papers and speeches of Jefferson Davis by beginning to secure copies of these from New Orleans, and in the same year the Department began providing reference service on its Confederate records. Rowland's wife Eron even compiled a biography of Davis' wife Varina Howell. In 1910 Rowland observed: "...while the activities of the Department embrace the care and custody of the State records since provincial days, and the records of every period are carefully preserved, no period has received more especial attention than that of the Civil War."[84] To a degree this is still true.

Rowland early exhibited his entrepreneurial bent in the promotion of state history when he ran a contest to name the first ten "great men of the state" to be included in a proposed Hall of Fame, which he compared in patriotic importance to the Parthenon, the Louvre, Westminster Abbey, and Independence Hall.[85] The vote was carried out through state newspapers, which printed cut-out ballots in 1902, and when it was completed he saw that biographical sketches of the winners were prepared and run in those same newspapers. Finally, where he could find them, he persuaded the descendants of the honorees--and of anyone else of historical importance he could think of--to pay for their oil paintings to be displayed in the Capitol. This presaged his later vanity publication efforts, when he would pay for worthy historical publications by casting them as multivolume works, making one or more of the volumes consist of "historical" profiles of rich and influential men who paid for the privilege.[86] He aimed from the beginning to edit and publish historical materials to make them available to the public, and his annual reports soon became venues for such publications.

Rowland also attempted to collect materials on Mississippi history wherever they might be found, including in various departments of the Federal government, in the counties of Mississippi, particularly Adams, and in the archives of the European colonial powers that had occupied Mississippi. In connection with the records of the Spanish dominion in Natchez, which had been formally collected and bound in 1803 and remained in the Adams County Chancery Clerk's office, Rowland cited the 1902 law, indicating "That any State, county, or other official is

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[82] Rowland, *Eleventh Annual Report*, 34 (italics added).

[83] Rowland, *Fourth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1906), 18.

[84] Rowland, *Ninth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1911), 14.

[85] Rowland, *First Annual Report*, 82.

[86] Dunbar Rowland, *Mississippi*, 4 vols (Atlanta: Southern Historical Publishing Association, 1907); three of these volumes represent an encyclopedia of people, places, and events of Mississippi history; the fourth is a biographical volume of famous and still-living men with engravings. Rowland's *History of Mississippi: The Heart of the South*, 4 vols. (Chicago and Jackson: S.J. Clark Publishing Company, 1925) is a narrative historyfor the first two volumes, but volumes 3 and 4 contain biographical sketches and engravings of prominent businessmen and politicians. Of course it should be noted that although these sketches were flattering of necessity, they do now have their own kind of historical value.

hereby authorized and empowered in his discretion, to turn over to the Department for permanent preservation therein any official books, records, documents, original papers, newspaper files and printed books not in current use in their offices." He observed in 1903 that by then the law had been generally observed by the heads of state government departments, but he had not yet brought it to the attention of local officials.[87] In 1905 he capitulated and borrowed the Natchez Spanish records to make copies. Over succeeding years he would find that the phrase "in his discretion" would cripple his efforts repeatedly (the Spanish records remain in Natchez to this day), but until new records management legislation passed in 1981 introduced records management officially, moral suasion was all the directors had to work with in convincing officials to turn over their records.

Having published a volume of Territorial papers in 1906, Rowland also began in that year his project of securing colonial-period transcripts from Europe with a trip to England and France, where he examined available materials and spent $1000 in orders for transcripts from the respective national archives. Together with preliminary lists of materials, including a calendar of the materials being copied in France, Rowland published short histories of the respective European archives, showing that they had all had had periods of inattention not unlike Mississippi's.[88] Reading these descriptions, it becomes obvious that Rowland was thus early being exposed to the history of archival practice and bureaucratizing recordkeeping in Europe. When in 1910 he represented the American Historical Association at the International Congress of Archives in Brussels, he presented a paper on the desirability of centralized governmental archives, citing his frustrations in dealing with widely scattered departmental archives in the U.S. Adoption of "[t]he policy of concentration," he observed, "is only a matter of time." On that trip he toured the archives of Belgium, Holland, and Germany, of which he observed that while the territories of the recently formed German Empire had well-organized archives, there was as yet no national archive. [89] Rowland was and remained an outspoken proponent of a national archives for the U.S.; he continued active in the movement for a national archives until his death, hoping to become its director, and was proud of his participation in the creation of the emerging historical profession in the U.S.

Space was a serious consideration from the beginning. Rowland's annual reports reveal that some pressure and influence had to be brought to bear to secure two rooms in the newly-built Capitol building in 1903, and by 1912 he stated categorically that as far as official records of state government were concerned, "our limited floor space has prevented further accessions" beyond the original fifty boxes.[90] He does not explain why he and his board continued to solicit and collect private manuscript materials, including those of the First Mississippi Bank in 1913,[91] although scattered remarks suggest that officials may have been as unwilling to part with the records of their departments as Rowland was happy to use their reluctance as an opportunity to make a case for more space. In 1903 he said the executive still retained the records of governors Ames, Alcorn, and Powers (1868-1882) as well as those of their successors, which "give the record of the brave struggle to rebuild the State [after the Civil War and Reconstruction], which has been made under the leadership of Governors Stone, Lowry, McLaurin and Longino."[92] By 1907 he seems to have obtained the records, however, since he observed that only the executive journals of governors from 1882 to date of writing were "yet on

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[87] Rowland, *Second Annual Report*, 13-14.
[88] Rowland, *Fifth Annual Report*, 30-55.
[89] Rowland, *Ninth Annual Report*, 16.
[90] *Eleventh Annual Report*, 29.
[91] *Twelfth Annual Report*, 34-36.
[92] *Second Annual Report*, 56.

file in the office of the governor."[93] From early on he was campaigning for the renovation of the vacated Old Capitol to serve as an archival and museum facility, but though he organized women's historical groups to pressure the Legislature, notably in 1917, this argument bore no fruit in his lifetime; in 1935 he was still urging the Legislature to provide the Archives with adequate housing.[94]

From 1912 to 1935, Dunbar Rowland apparently prepared no separate annual or biennial reports; data about the Department's activities are only to be found in its actual publications, Rowland's correspondence, and the state *Official and Statistical Register* publications first done by the Department but eventually taken over by the Secretary of State.[95] Indeed modern folklore had it that his Board of Trustees, after its first two six-year terms, was not replaced.[96] Rowland and his Trustees clearly represented an enclave of "Bourbon" interests in an age of "redneck" populist politics, and certainly the tone of the last Annual Report, that of 1935, suggests that his troubles had been political, since he praises the people, as represented by the Legislature, for refusing "to allow the Department to be used as political spoils."[97]

Rowland's efforts had all the marks of "firstness": he was able to take into custody the existing "old" records that did not embody power useful to current incumbents, chiefly of the Territorial and early statehood period, and found them in a confused and sometimes fragmentary state, presaging what Schellenberg would find when he took custody at last of Federal records in 1934.[98] But in spite of writing clearly about the terrible state of the records, Rowland was then prevented from obtaining relatively current records because government officials wanted to keep them in their own offices, and apparently he did not solve this problem as long as he was Director. Thus although he was clearly biased in his selection of records he deemed to be important, he was also materially opposed in his efforts. As to practice, he was influenced by his own professional training in the law, but was an active participant in the early professionalization of archivy. Observing the best practices of his time in the archives of Europe, he arranged the official records by date within departmental series, not so very differently from the way they have continued to be kept.

William D. McCain: Modernization and order, 1937-43

On Rowland's death, his wife Eron temporarily served in his place for a month until the Board could meet and choose a replacement to direct the three-member staff. William D. McCain, a native Mississippian with a PhD in history from Duke University who had been serving as an assistant archivist in the new National Archives in Washington, was selected by

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[93] Rowland, *Sixth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1908*)*, 26.

[94] Rowland, *Biennial Report of the Mississippi Department of Archives and History* (Jackson, 1936), 5.

[95].Rowland edited the first *Official and Statistical Register* of state government, full of details about elected officials but also a vehicle for encyclopedic information about Mississippi history, in 1904, distributing 6500 of them to schools. Subsequent editions were produced in gubernatorial election years of 1908 and 1912. After this the publication was taken over by the Secretary of State, with a corresponding reduction in historical content.

[96] William D. McCain, "History and Program of the Mississippi State Department of Archives and History," *American Archivist* 13 (1950): 27-34. Further research in the archives, including records of Senate confirmations, has shown that indeed there was a functioning Board between 1912 and 1936, but particularly in the 1920s it apparently met no more than annually, as the law required.

[97] Ibid., 3. He celebrated this in vain. From the time he died until the 1980s, when the Attorney General's lawsuit removed current elected officials from service on boards and commissions, the Department would have influential elected officials on its Board.

[98] Linda Henry has observed in her 1988 essay "Schellenberg in Cyberspace" that archivists tempted to "postcustodial" solutions should take heed of the experiences of those who like Schellenberg had to pick up the pieces after years of "noncustodial" regimes.

the Board of Trustees to replace him. In his first biennial report to the Legislature, he laid out a Program for the Future which stressed "an enlarged program of acquiring and preserving archival records." With respect to official records, McCain had this to say:

> If the Department is to do its full duty along this line, it must eventually work out a system whereby the records of every state department and agency will be transferred to its jurisdiction as soon as they become non-current. A two-fold benefit will result: On the one hand this will make available badly-needed space in the various state offices. On the other hand the preservation and expert care of these records will be insured. *The Department is not ready at the present time to undertake this function in its entirety, but a move in that direction should soon be made* and the ultimate goal should constantly be borne in mind.[99]

McCain took on his job with the firm intention of introducing up-to-date standards throughout the Department's activities, and he was mindful of every method he could find to get things done. Where Rowland had spurned the WPA and set up his own genteel county-history-writing groups, McCain made use of WPA labor both to gather historical materials and to carry out basic conservation and classification work.[100] In 1939 the addition of McCain's complaints on lack of space to the sustained complaints of Rowland finally had an effect, and space was set aside for the Archives in the new War Memorial Building. The availability of increased space in the building, which the Archives occupied in early 1941, must have had something to do with this new enthusiasm for obtaining records, but unfortunately it did not extend as a policy to *official* records; during the period 1939-40 leading up to the move, McCain only accepted official records that were given to him but did not solicit them. On the other hand, although space was allegedly at a premium before the move, special efforts were made during this same period to collect the private papers and plantation and business records of famous white male Mississippians, including James Alcorn, J.F.H. Claiborne, David Holmes, and L.Q.C. Lamar. In 1940 McCain was elected to the Executive Council of the Society of American Archivists and served for four years.

Charlotte Capers: The home front, 1943-44

Charlotte Capers, a 1934 graduate of the University of Mississippi in English who had joined the Department in 1938 as "stenographer," was promoted from her job of "research and editorial assistant" to "Acting Director" when McCain joined the Army in 1943. Like "Rosie the Riveter" and thousands of other women, she carried out McCain's policies while he was gone, closely supervised by an aging (the last son of a Confederate veteran on the board died in 1944), conservative all-male board typical of Mississippi state government in wartime, and stepped down when the close of hostilities permitted McCain to return to the job. Her work focused upon publications and other special projects, including the erection in a very short period of time of hundreds of historical markers throughout the state.

William D. McCain: Maintaining traditionalism, 1945-55

With the end of the war and McCain's return a new attitude toward official records began to be articulated. First there was the claim that the brand new space was already full:

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[99] McCain, *Biennial Report of the Mississippi Department of Archives and History, July 1, 1937-June 30, 1939* (Jackson, 1939), 27; emphasis added.
[100] Ibid., 28.

Little effort was made during the biennium from July 1, 1945, to June 30, 1947, to add to the collections of state archives in the Department of Archives and History. The few small additions will be listed at a later date. The reason for the failure to acquire non-current records of the state government is very simple. The space allotted to the Department of Archives and History in the War Memorial Building is now completely filled. Additional space, probably in the Old Capitol, will have to be provided in the future if the Department is to continue its main function of collecting, arranging, preserving, and making available to the public the archives of the State of Mississippi.[101]

Yet in the next paragraph of the report, McCain reported that "Special efforts were continued during the period from July 1, 1945, to June 30, 1947, to add to the private manuscript collections of the Department..." In addition, voluminous printed materials were also acquired. The reason for this disparate treatment of official records and private manuscripts was given by McCain in his "Program for the Future": "The acquisitions of the papers of private individuals and organizations should continue to be stressed. *The history of a state in human terms is obtained in the private manuscript collections.*"[102] In subsequent years this policy remained in force: in 1949-51 the Department accepted 80 rolls of official records microfilm, but suggested that it could offer agencies "personnel to service their non-current records" and "more adequate care of the records"[103]--apparently an intention to allow custodianship of inactive records to remain with agencies. In 1950 an immense collection of governors' papers dating from 1900-1916, for which the Department had allegedly searched for years, "were discovered behind a stack of transfer cases in a storeroom in the New Capitol....As a result of the interest of Governor Fielding L. Wright and members of his staff, these papers and records, together with papers of other governors who served from 1914 to 1940, were transferred to the Department."[104] As Capers reported in the 1951-53 *Annual Report*, while McCain was once more away during the Korean conflict, space was somehow found for these records.[105] Upon McCain's return another lot of official records were reluctantly accepted, including election records, bound Treasurer's records from before 1900, and 20 volumes of records of the Legislature, although the election records would not be processed until ten years later.[106] During all of these years official reports continued both to lament the lack of space for official records and to report proudly on the acquisition and processing of private manuscripts. A pattern was also established in which official records groups were simply named, while a more formal descriptive listing was offered for each private manuscript collection, no matter how small.

In 1953, returning to the Department after his military service in Maryland, McCain hoped "that he may be permitted to serve the remainder of his active life in the Department in the service of the people of Mississippi," and indeed during that year he expanded the influence of the Department by serving as the president of the Society of American Archivists. In 1955,

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101 McCain, *Biennial Report of the Mississippi Department of Archives and History, 1947-49*, 12.
102 Ibid., 25; emphasis added. In a speech presented to the Society of American Archivists in 1948, McCain stated in no uncertain terms that "in no circumstances and at no time in the future, do we intend to become a filing agency for the various departments of State government," McCain, "History and Program," 31.
103 McCain, *Biennial Report of the Mississippi Department of Archives and History, 1949-51*, 26. That these papers turned up as a result of the actions of governor Fielding Wright may have been due to the reorganization efforts of Mississippi's "Little Hoover Commission" taking place under his aegis.
104 McCain (Capers), *Biennial Report of the Mississippi Department of Archives and History, 1951-53*, 12.
105 Ibid.
106 Charlotte Capers, *Biennial Report of the Mississippi Department of Archives and History*, 1961-63, 17.

however, wider opportunities and a better salary beckoned: McCain was offered the presidency of Mississippi Southern College (shortly to become Mississippi Southern University) in Hattiesburg, and he departed to academe.

Charlotte Capers: Buildings and programs, 1955-69

In 1955 Charlotte Capers once again took leadership of the Department, this time unanimously elected by the Board of Trustees in her own name, but the established preference for private papers continued, at least in the boilerplate language that characterized the printed reports. Records from the State Bond Commission were acquired almost immediately, but could not be taken into custody "because there is absolutely no more space in the quarters of the Department of Archives and History in the War Memorial Building."[107] Yet on the next page of her biennial report, Capers said that "Special efforts were made...to add to the private manuscript collections...," after which 44 collections were described. In this report as well was mentioned for the first time the idea of records management and existing laws allowing destruction of records, and Capers said that she planned to propose legislation authorizing the Department to create records schedules.[108] By the next biennial report the action had not yet been taken, though it was still proposed. Removal of the "Hall of Fame" portrait gallery to the antebellum Old Capitol, which had been restored to provide a State Historical Museum, opened up more room, permitting the Bond Commission records to be taken into custody and processed and 35,000 Confederate pension applications from the Auditor's office to be acquired and processed as the Department received a $15,000 appropriation to develop a centennial commemoration for the Civil War, to be carried out by a commission under the aegis of the Department. Civil War programs dominated the Department's work for the next biennium, during which some small official collections were acquired. Though no action on records management was taken, planning for it became more elaborate.[109]

In 1962 Ernst Posner, carrying out his study of state archival programs for the Society of American Archivists, visited Mississippi and urged Capers to get on with such a program. A detailed proposal was printed, and the 1962 legislature was successfully approached to require elected officials to hand over the papers of their offices to the Department. In July of 1963 Capers published an article "Records Management for Mississippi," in *the Journal of Mississippi History*, but no legislation was forthcoming, space was exhausted in the aging War Memorial Building, and funding was short.[110] In her 1963-65 report, Capers observed of records management, "The Department has neither staff, space, nor authority to undertake such a program at the present time."[111] In 1966, however, two laws covering the germ of a records management program were passed, designating commercial repository Southern Vital Records as the State Records Center for noncurrent administrative records and establishing the Department as advisor on scheduling. As a result, the Department acquired a few more official records collections, with a focus on former elected officials, including John Sharp Williams, as well as election returns and minutes of the higher education governing board (at the same time, of course, 95 private manuscript collections were opened).

In 1967 Capers was reelected to serve for an additional six years. Efforts to acquire elected officials' papers continued, and other collections were made as well, including Secretary

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[107] Capers, *Biennial Report of the Mississippi Department of Archives and History, 1955-57*, 13.
[108] Ibid., 24-25.
[109] Capers, *Biennial Report of the Mississippi Department of Archives and History, 1959-61*, 53-54.
[110] Capers, "Records Management for Mississippi," *Journal of Mississippi History* XXV (July 1963), 202-7. Posner made the latter unflattering observations about MDAH in his *American State Archives* (Chicago, 1964).
[111] Capers, *Biennial Report of the Mississippi Department of Archives and History, 1963-65*, 63.

of State, the 1919-24 Bond Commission, Treasurer's records from 1896-1900, and other miscellaneous records. When construction of a new archives building was assured in 1969, however, Capers resigned as Director and undertook a lesser responsibility in the Department, which she held until retirement in 1983.

Richard Aubrey McLemore: Construction and publication, 1969-73

Dr. Richard Aubrey McLemore, a former president of Mississippi College, was president of the Department's Board of Trustees when Charlotte Capers decided to step down as Director, and he was named to complete her term of office. McLemore's chief accomplishments prior to his retirement were to complete the construction of the new archives building, to get the Department moved into it, to acquire the Grand Village of the Natchez Indians and Historic Jefferson College, and to edit a new two-volume multi-authored *History of Mississippi* as part of Mississippi's participation in the national Bicentennial celebrations.

With the move into the new building, a spectacular increase in the acquisition of official records took place, although official records were still overshadowed by other kinds of records and archival programs as a whole seemed to be overshadowed by other programs. First focused upon obtaining the papers of former elected officials, collection efforts expanded under Archives and Library division director Carl Ray to embrace many different agencies, boards, and commissions, powerful as well as small; in 1971 for the first time the Department's own records from 1902 to date were accessioned into the permanent archival collections. These collections of official records, however, were made through personal solicitation of officials, not through a systematic records management program, and the majority of records collected were of nineteenth-century or early twentieth-century date. During 1969-73 also, the Department obtained 3500 reels of microfilmed county records from the Genealogical Society of Utah's work in Mississippi.[112]

Elbert R. Hilliard: Expansion and professionalization, 1973-present

Elbert R. Hilliard had been hired by the Department in 1965 as a Curator of History in the new State Historical Museum, and was subsequently the first to head up its new Division of Historic Sites and Archaeology in 1970. Accordingly, his greatest interests when he came into the position were concentrated upon the historic preservation program and the museum, but he saw that competent administrators were placed in charge of the Archives and Library Division, and they in turn were increasingly able to hire professionally-trained staff. Thus it is with Hilliard's incumbency that the orderly tracking of incoming official records by year and by standardized amount begins, manifested in our ability now to indicate how many cubic feet have been acquired annually since 1974. Although departmental recordkeeping and the acquisition of official records unquestionably improved, directorial production of annual reports ceased in 1989 as the task of preparing annual budgets began to dwarf and overshadow it, so officially-acknowledged policy and planning with regard to official records after that date must be tracked through budget requests and Board of Trustees minutes.

Under Hilliard's leadership, in spite of a relatively low priority at the outset, the Department pressed forward to establish itself as the official repository for state government records. In 1975 the Department underwent a successful performance audit carried out by the

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[112] R.A. McLemore, *Annual Report of the Mississippi Department of Archives and History*, 1969-70 (1970), 1970-71 (1971), and 1971-72 (1972), 1972-73 (1973), Jackson, MS.

Legislative Audit Committee[113] and produced the first new guide to Official Records holdings since 1914.[114] In 1976 Hilliard pointed out that Mississippi was one of only three states that still lacked a records management program.[115] This assertion was underlined by three events: the increasing tendency of state politicians to give "their" office papers to state university archives, the establishment by the Commission on Budget and Accounting of a Central Records Storage Facility for semiactive agency records, and the fact that the Archives building, new so short a time before, was beginning to run out of space. Records management, then, was being seen as a means of disposing of large quantities of modern paper records so as to preserve precious archival storage space--a common position for the era.

The effort to push toward such a program was undertaken in collaboration with the Legislative Audit Committee, which conducted its own study of records management needs for ensuring government accountability in 1978. A consultant from the National Association of Government Archivists and Records Managers was retained in the same year to assist the Department of Archives and History in reviewing relevant Mississippi statutes and crafting additional needed legislation. This consultant discussed his findings with the Legislative Audit Committee, the Commission on Budget and Accounting, and the Central Data Processing Authority (CDPA), with which the Department was working to establish the program. In 1978 the Department received a grant from NHPRC to carry out a survey of executive branch records being kept in the agencies in cooperation with the Audit Committee and CDPA, to be used to back up the request for records management legislation. With this backing, an Archives and Records Management Law was enacted in 1981.

Under the Act, the Department took over the operation of the Central Records Storage Facility and set out to establish a records management program, handicapped by having received funding for only one archival professional to staff the program and supervise Facility staff in their warehouse-oriented tasks. The director of the new Records Management Division of MDAH made a brave start by producing an educational handbook for the agencies[116] and working with the State Records Committee established by the law to review proposed records disposition schedules.[117] Meanwhile, in a broader effort to support the development of archival programs generally and records management in particular, the Department participated in the competition to secure an NHPRC State Historical Records Assessment and Reporting Project.

This project began in 1982 and was completed in the following year. For state government records, researchers administered a questionnaire to state agencies, held a public hearing on state records management and archival services, undertook in-house evaluations of the handling of official records, and solicited consultant reports on microform and machine-readable records. The responses to the questionnaire reflected a still confused agency audience that had not yet adjusted to the metamorphosis of the former Central Records Storage Facility, run by the Commission on Budget and Accounting and providing only short-term storage of partially inactive records, into the State Records Center, run by the Department of Archives and History and aiming to provide a full-service records management program;

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[113] Legislative Audit Committee, *A Performance Evaluation of the Mississippi Department of Archives and History*, Report #38, October 15, 1975.

[114] Thomas W. Henderson and Ronald E. Tomlin, compilers, *Guide to Official Records in the Mississippi Department of Archives and History* (Jackson: Mississippi Department of Archives and History, 1975).

[115] E.R. Hilliard, *Annual Report of the Mississippi Department of Archives and History* (Jackson, 1976).

[116] *Records Management Handbook #1* (Jackson: MDAH, 1982).

[117] The Records Management law defined committee membership precisely: Governor, state registrar of vital records, state Auditor of public accounts, Secretary of State, and director of the Department of Archives and History or their designated representatives (*Mississippi Code 1972 Annotated*, §25-59-7).

most agency comments complained about the efficiency of pickup and retrieval runs by staff.[118] Issues relating to electronic records seemed like an afterthought. A major conclusion of the report was that "the machine-readable records of state government need to be addressed by both records management and archival programs," and it remarked that staff of the Central Data Processing Authority, which at that time had nearly complete control over computing in state government, expressed willingness to cooperate with efforts to gain control of machine-readable records. But the struggle to cope with space limitations in an already crowded building only ten years old, resistance by agencies to complying with the Records Management law so serious that eighteen years later some 57% of state agencies' records remain unscheduled, and chronic lack of adequate staff to carry out the duties of a records management program overshadowed everything else and vitiated most of the recommendations regarding electronic records.[119]

Staff did not lack awareness that the task would be difficult; the first director of the Records Management Division indicated, discussing how scheduling should be done, "It will be necessary for us to initiate the records management activity in state agencies in the future, since if we wait for them to come to us some will never come."[120] But hopes were high: in the same year, the director of the Archives and Library Division said, "as the provisions of the Records Management Act of 1981 are implemented, we should see a much greater volume of transferred records in the years ahead."[121] Further developments on the records front seemed to bode well for such hopes, since in 1983 the legislature passed a Public Records Act, promoted by Common Cause and supported by the Department, that defined a broad scope of public access to all records of state government, including active records still held within agencies. This legislation, by making active agency records accessible to the public, should have made any motives of avoiding accountability through the historical record useless.

In the fourteen years that followed the establishment of the records management program, concerns still centered on paper records, as the new building's storage space began to fill up in 1983, but it took until 1991-93 for a solution to be found in the form of movable shelving, and in the interim the tendency was not to encourage much records transfer because there was no space for them. The Department took the line of least resistance with regard to electronic records: where magnetic tapes were actually part of the records of a scheduled records series, they were mentioned but not scheduled. Records schedules gave lip service to a recognition of the existence of electronic records, but no serious attempt was made to deal with them proactively. Meanwhile, as technology changes accelerated, computers began to proliferate within state government, so that as CDPA of necessity relinquished a degree of its centralized control of state computing in the late 1980s, the opportunity to control electronic recordkeeping through a single access point was lost.

By 1996 it had become abundantly clear that the number and variety of electronic records being created in Mississippi state government were increasing alarmingly, and that they were not being regulated except through information technologists' professional standards, which did not address long-term retention of historical data except in a few cases. The Department had participated in NHPRC's 1991 meeting initiating its electronic records

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[118] H.T. Holmes, ed*., The Management and Preservation of Mississippi's Historical Records: Problems and Potential*, 2 vols. (Jackson: MDAH, 1982). The first volume of this report contains recommendations, the second a summary of the data gathered.
[119] See Short-Term Solutions 12-17 in volume 1, ibid.
[120] Elbert R. Hilliard, *Annual Report of the Mississippi Department of Archives and History* (Jackson, 1983), 31.
[121] Ibid., 21.

initiative,[122] and in 1996 it offered a successful research project proposal, of which the present case study, together with the posted online documents hereinafter cited, is the final report.

The Shape of Mississippi's public record at the millennium

What does the official record of Mississippi state government look like after nearly a hundred years of acquisition? Surprisingly ancient, actually. Because of the early devotion--lasting through the early years of the Civil Rights Movement--to collection of the records of the antebellum period, these records were always steadily accumulated when they could be found, whatever space was available to lodge them. At the same time other official records were either beyond the reach of the Department's power, as was the case with papers of elected officials, who often kept them in furtherance of their own business after leaving office and then gave them to university libraries or simply left them in their families' hands at death. Finally, many official records were accepted only with reluctance because of their bulk, as was the case with, for example, voluminous governors' papers and election returns.

The promise of records management, first promoted by Posner's study in 1964, did not come to fruition in Mississippi until 1981, when the machinery was finally put in place with a new Records Management law that called for the creation of a records management program in the Department of Archives and History, but even this law, in a compromise to secure passage, limited the Department's power by forbidding it to set recordkeeping standards. Worse, it failed to provide adequate funding to staff such a program sufficiently to schedule all existing state government records within a limited time and to follow up on those schedules in order to carry out dispositions and to update schedules regularly. Since that time, schedules have been prepared both according to a plan aimed at systematic coverage and at agency request--too frequently, only when agencies decided that they needed to clean out filing cabinets, hence after the fact of creation and indeed of disuse. But it has never been possible to keep up with current demands for scheduling and at the same time to fill in gaps, to keep up with needed changes as agencies have changed, and indeed to keep track of records due to be sent to the State Archives for permanent retention. As a result, although a records management program has been mandated since 1981, scheduled records acquired for permanent archival retention under the program amount only to a tiny trickle compared to the amount that the schedules actually specify as being created and having existed.

This is in part due to the design of the program, which was no worse than those put in place in many other states as a result of Posner's study. It rested on a notion of general schedules and wholesale records destruction that focused upon the carefully-constructed records of high-profile activities of important officials, and owed more to political concerns for secrecy and storage space considerations than to more recent concerns with governmental accountability. Further, because changes in recordkeeping technologies had been slow up to the 1960s, the Mississippi program was built on 1960s perceptions. It did not account for the emergence by the 1980s of automation that has revolutionized recordkeeping technology and that promises to continue at breakneck speed. In short, the program was based upon an erroneous assumption, as characteristic of archival thinking as of records management, that recordkeeping in American state governments was as subject to discipline and bureaucratic standardization as was that in European governments, which as we have seen was not and never has been the case.

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[122] NHPRC, *Research Issues.*

The Electronic environment changes everything--or does it?

In 1992 David Bearman addressed the problem of dealing with electronic records by suggesting that fundamental changes in the records themselves would lead to fundamental changes in the way they were managed. In Bearman's view, the "electronic information revolution...threatens to transform the relatively stable framework of bureaucratic organizations" and "is leading to new practices of communication and to new forms of records...."[123] Bearman seemed to feel then that electronic communications were moving back almost into the region of somatically-controlled knowledge; he drew parallels with telephone communications, which as we have seen did indeed represent a center of power for those who used it and could preserve its lack of regulability. In the case of electronic communications, practical invisibility meant that electronic communications were able to escape from bureaucratic control unless bosses could utilize the talents of their computer staff to bring it under discipline. This was in fact the tack Bearman and his associates at the University of Pittsburgh took, providing the specifications for "a user interface layer which presents functionality to users in terms of the business processes sanctioned by the organization."[124] In Bearman's view, power would devolve on the electronic records archivist in virtue of his control of that user interface layer.

Bearman's concerns echo those of many commentators on automation, many of whom have deplored the "decentering" of organized social institutions as a result of the use of computers and computer networks. Many of such commentators, however, are little enough aware of the realities of automation implementations that they believe them to be more earthshaking than they in fact are. Like any important change in work process or style, automation has met with consistent resistance from existing employees, especially those for whom involvement in automation has meant the acquisition of new skills. Nor have executive staff been exempt from such buffering practices: many executives have set the resistant tone by insisting that paper copies of electronic files be printed and filed in paper files to support their accustomed ways of working. In particularly technology-friendly businesses, like the computer industry itself and the media, the push to realize profits through automation has been strong, and that lead has been followed--in self-defense--by the older "smokestack" industries in an attempt to reinvent themselves as" profit centers." To the degree that efforts have been made to "run government like a business," some such innovations have begun to infiltrate government.

But government is also required *not* to take risks with the taxpayers' money, and because of this governments everywhere have been reluctant to become early adopters of so-called "bleeding-edge" technologies. This conservatism has resulted in an intentional and well-recognized technology lag between private industry and government, and for practical purposes it has meant that computer applications in government have not yet yielded the long-promised "paperless office" or "one-stop government services portal," although efforts toward the latter are proliferating everywhere. It also means that theoretical archival models based upon the possibilities promised by automation technologies may not be a very good fit with the actual systems in use.

There are interesting ethical issues here too, which have to do with the fact that the records of government are intimately involved with the kind of government we want or can possibly have. The big danger of making all government records electronic, without adequate

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[123] David Bearman, "Diplomatics, Weberian Bureaucracy, and the Management of Electronic Records," 169.
[124] Ibid., 175. In the Pittsburgh implementation, this would become "Business Acceptable Communications."

safeguards for preserving them, is that they will be destroyed and the institutional memory of government will be lost. But how far should we go? For all practical purposes, assuming that all government records are in fact electronic (and most now incontestably originate that way), we could save them all. The costs to do so are plummeting and the computational means to manage and access them will soon be at hand, adapted from the techniques developed by scientists to manage very large databases and now being used by business for "data warehouses." In a totally automated environment, every single memo, every single unofficial email mash note, every single monetary transaction can be kept--and in fact it might be easier to keep them than get rid of them, because only one decision need be made. But the implications of completely automated systems that also automatically record for permanent retention everything that transpires within them are serious: they amount to the creation of an "iron cage" of the "capillary discipline" envisioned by Foucault in which every action of every government employee is recorded and potentially open to scrutiny. Cyberspace, as Lawrence Lessig has pointed out, is in principle *perfectly* regulable.

Is this what the public wants? The message of dystopian visions like *Brave New World* and *1984* has already provided the answer to that question as far as personal freedom and privacy are concerned. Yet Marshall McLuhan also taught us that the medium is the message, and communications media can structure the way human beings articulate with the world. More recently, Lawrence Lessig's arguments about cyberspace as a public sphere in which actions can have repercussions in real space, in the *actual* public sphere, have also raised serious questions. If government employees carry out their jobs in perfectly automated environments, one might argue, environments in which Lessig's "code as code" determines that all and only what is required by law can be done, then government should work perfectly and should serve the people in an ideal way. Employee autonomy would be obliterated in favor of only what is allowed or required. Some employee actions might even be replaced by the construction of perfectly-defined automated agents. And every automated interaction of government with citizens could be imperishably preserved to prove that it had been properly carried out.

This vision of governmental automation is being pushed as hard as possible by technology vendors, who fill advertisement-sponsored "free" publications for government information technology staffs with case studies of automated courtrooms, social services case processing, crime-pattern prediction systems, and self-service licensure programs. They leave the impression that all of these things work wonderfully and provide enhanced service to citizens, but their implications are never questioned, either for the citizens or for the government employees themselves.

For historians, too, the idea of complete information about all of government's workings (and indeed about the purchasing habits of every supermarket shopper, for that matter) seems like the fulfillment of a dream, even if a few may acknowledge that sifting through all those data just might be a difficult job. On the other side of the coin, however, such complete information represents a relative invasion of such private space as a government employee has: the government employee at her keyboard is completely vulnerable to government surveillance, and so are citizens who choose to interact with government by this means. If we might agree (and Mississippi state law would support us) that except for certain bodily functions no state employee enjoys a right to privacy in his or her work, we would certainly be unwilling to agree that citizens lack such rights--yet just this issue is becoming increasingly problematic in cyberspace.

Lawrence Lessig has been the most visible and thoughtful spokesman for the notion that there are important legal implications to the potential power we have to dictate what happens in cyberspace, power that we lack in real space.[125] He has pointed out that attempts to

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[125] Lawrence Lessig, "Reading the Constitution in Cyberspace," *Emory Law Journal* 45(3): 869-910; 878.

regulate cyberspace--and I would include here those of early proposers of electronic recordkeeping models--usually amount not to attempts to innovate in a medium where anything is possible, but rather to constrain that medium to the same things that are possible in real space: "as the constraints of technology give way, or as technology makes possible a kind of control never before imagined, there is a question whether to allow these gaps to be filled with increased governmental power, or with increased protections for individual privacy."[126] Lessig argues that government regulation has always been so effectively thwarted by the very existence of "friction" in the operation of its laws within real space--the result of which is in fact the privacy that we enjoy--that it has never occurred to us to worry about how to do *less* regulation in an environment where regulation can be perfect and friction almost absent: in other words, the Constitution addressed a world in which technology was imperfect, hence the increased rationalization possible in cyberspace may not be consistent with the foundation principles of the Constitution, particularly if it comes only from the executive without the input of the representatives of the people.[127] If we are going to construct an electronic environment for governmental activities, we had better specify it precisely to ensure that it is not only effective but that it meets constitutional principles. Of course Lessig too is speaking of a cyberspace vastly more rationalized than anything we know today, but his attention and that of other cyberlaw specialists to these issues signals an area for concern that archivists would do well to consider. In these respects the electronic environment really does change everything.

At least it does if we choose to *retain* the perfect record of actions that it makes possible. But since archivists have chosen not to do this in the past, is it likely that they will choose to do it in the future? The question really is, where do we draw the line when everything can be kept, and who tells us where to draw it? As Lessig has argued for other aspects of cyberspace, there really are no precedents for this. In the past, archivists received the "modern" records that agencies saw fit to preserve for their own reasons, and finding them bulky, they chose to reduce their bulk--not because there was any constitutional reason to do so, but because the excuse of inadequate space considerations to house the vastly multiplied records of a changed recordkeeping technology was invoked to force it. No new principles or new understandings of bureaucratic recordkeeping and what it actually recorded were adduced to support this change. Appraisal practice with respect to "modern" records, in short, was another case of "is" becoming "ought." In the face of a new environment where it is easier and perhaps cheaper to save everything than to delete selectively, perhaps we should use the occasion to think more deeply about what we are doing.

Terry Eastwood (University of British Columbia) and Ken Thibodeau (National Archives and Records Administration) have been arguing for years in favor of the superior accountability that electronic recordkeeping could facilitate, but one man's accountability can very quickly become another's intrusive surveillance, and archivists are not only unaccustomed to making such decisions, but have even been warned off doing so since Jenkinson. Archivists, it is clear, are therefore called upon to understand just what *they* are doing and how well *it* harmonizes with constitutional principles. As we have already seen, in American government Lessig's "friction" is not only the material difficulty of paper gluts and lost telephone messages, but overt resistance leveraged upon the professional power of in-and-outer government officials. Therefore it is up to governmental archivists to expose the issue and bring it to public consciousness. But since it may be a long wait for public action to be taken, archivists must

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[126] ibid., 895.

[127] Ibid., 906-10. Once more it is worth pointing to Andrew Pickering's notion of "material agency" as the behavioral qualities of material reality that are captured and tamed for use by technology: here, Lessig's "friction" can be compared to the material agency or resistance of the material world, that can be overcome entirely when the world is virtual and fully determined by our creation, fully manifested in our technology.

also take the responsibility for deciding what will happen in the interim--because they *are* responsible for whatever preservation regime they construct.

The construction of an electronic records program therefore requires that archivists first understand the recordkeeping processes they are attempting to document and how they really work instead of how they are supposed to work: it is therefore necessary that the compromises and resistant practices of the implemented system should be documented as well as the "official" system. Archivists must also review their own practices of documentation and how they square with both legal and historical requirements. Finally, archivists need to decide whether what they have been doing is what they should continue to do when many of the rules have changed.

Electronic records preservation in the real world: The Mississippi environment

To make a start in managing state government electronic records, we have no other choice but to begin from where we find ourselves, which means coping with and attempting to improve on both established paper recordkeeping practices and existing electronic records creation and disposition regimes. We can hope that demonstration projects and guidelines can influence any future reorganization and efficiency efforts with regard to recordkeeping, but it is up to us to demonstrate the importance and feasibility of anything we suggest. Thus our first consideration has to be the electronic records environment as it exists today in Mississippi state government.

History of computerization in Mississippi state government

Computerization in Mississippi state government is far less advanced than in some states, as might be expected, but is certainly no less chaotic. Early applications in the late 1960s and 1970s, when "computer" meant "large multiuser mainframe computer," were directed at large-scale and highly-visible applications: legislative bill system, statewide accounting system, state employees' retirement system, law enforcement network, personnel system, etc. Not until the mid-1970s did agencies have interactive access to the central computer, but by the early 1980s microcomputers, with all the drastic changes they entailed, began to infiltrate agencies in ones and twos disguised as word-processing and accounting machines and even as mainframe terminals. Influential agencies were able openly to obtain online terminals connected to the mainframe or, in a few instances, their own minicomputers, in many cases driven by Federal grant-funded projects. Toward the end of the 1980s and early 1990s, PC networks began to be the reality as cheap desktop computers began to be adopted for most document-generation activities. By the close of the 1990s, state government as a whole had belatedly bought into the client-server model just when the trend was toward an Internet-everywhere model.

This process has been orchestrated through something of a struggle between a quasi-agency created in 1970, called the Central Data Processing Authority (CDPA), and the other agencies of state government. Originally consisting of the staff charged with the management of the state's mainframe computer, and governed by a board made up first mostly of legislators and later mostly of businessmen, CDPA was given control of the procurement process for all computers and computer services for state government, including institutions of higher learning, and by this means, it was thought, would direct the rational implementation of automation technologies across state government. CDPA's operational expenses were funded by usage fees from the agencies rather than by direct appropriation. CDPA was therefore forced to focus upon bringing in work for the mainframe and its programmers in order to justify its existence, and to deny requests for independent computer installations (except from universities). Yet at the same time, since there has not so far been an effort from the Mississippi governor's office to orchestrate a state government computing policy, there was very little for CDPA to enforce. Some powerful agencies simply ignored CDPA, while others chafed against what their own computer staffs saw as outdated technology. This struggle led, as might be imagined, both to covert computing activities in the agencies and to failed projects on the mainframe--and in both cases also to loss of potentially archival records.

The Department of Archives and History was not unaware of these developments. When in 1982 the Department participated in NHPRC's Historical Records Assessment and

Reporting Project, in which both the legislative PEER Committee and CDPA cooperated, one of the findings of the resulting report was: "The machine-readable records of state government need to be addressed by both records management and archival programs."[128] The report went on to recommend several measures that should be taken by MDAH in the short term:

- Include among its staff a professional with experience in machine-readable archives
- Establish an effective working relationship with the Central Data Processing Authority
- Identify the computerized files in those state agencies which are entirely federally funded [and therefore not officially under control of CDPA]
- Establish a procedure to evaluate the continuing value of computerized data produced under contracts [and therefore possibly not under control of the contracting agency]
- Establish a set of procedures for accessioning, preserving, and referencing magnetic tape
- Establish a continuing education program in data processing for the professional staff.[129]

In retrospect, and in view of the coming explosion of computing, these observations now sound extraordinarily naive, reflecting as they did what we then believed was a closely controlled central repository for "machine-readable data," as we then thought of electronic records. Clearly also they reflect the Archives' willingness to assist CDPA in the centralization of state government computing in return for assistance with the regulation of automated recordkeeping. But nothing was done at the time, and things would get much more unregulated as microcomputers spread everywhere and more and more original records were created on them without anyone's thinking for a moment that records creators needed training in managing computer records.

In 1995-96, after years of complaints and even outright rebellions from some agencies, profound changes in technology, recommendations in the 1988 Executive Branch Reorganization Study Commission, and an institutional study carried out by the Council of State Governments in 1993, CDPA was reorganized as the Department of Information Technology Services (ITS) under its second director, with a new "user-friendly" and "service-oriented" focus. Services were still paid for by a charge-back system, but agency autonomy for office automation and other low-level computing was recognized as ITS shifted its ground and began to concentrate on controlling the state government telecommunications network and the largest mainframe projects. Yet although CDPA/ITS had been grinding out a "master plan" for state computing since 1990, there is to this day still no overall computing policy statement forthcoming from either the governor or the legislature.

During all this time, the Department of Archives and History took no particular stance on the preservation of electronic records. The Department had no general-purpose computer equipment until 1981, and did not make direct use of the CDPA Data Center until it was phased into the centralized accounting system in 1995. Computer-generated paperwork within the Department remained just that, paper filed in filing cabinets. No policy statement about the internal management of electronic records was made. When the Department took over the State Records Center in 1982, it found that it had also inherited the role of offsite storage venue for the CDPA mainframe backup tapes, and that role continues to this day, but the only form in which the Records Center or the Archives could receive electronic records was as physical media. No tape library services, which would have been required to maintain computer media in readable form, were even planned, and records management schedules seldom included computer-readable media.

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[128] H.T. Holmes (ed*.), The Management and Preservation of Mississippi's Historical Records: Problems and Potential, vol. 1, Findings and Recommendations*, 25.
[129] Ibid., 56.

Choice of a project partner

Technology adoption histories are equally idiosyncratic for each of the agencies of state government, frequently driven, as might be expected, by common professional practices in the functional field with which they are linked. Most of the agencies that have made significant use of technology are larger and more powerful than Archives and History and are likely to have gone through (if indeed they do not still inhabit) a Mainframe Age for part of their work. When we decided that it was time to address the problem of electronic records directly, we were acutely aware that the general funding situation in Mississippi state government, combined with our own lack of influence, would preclude the elegant and comprehensive solution adopted by the National Archives and Records Administration (immediate mandate for all agencies to install networked records management systems by a deadline date not too many years into the future). At best, this solution would be something for which we would have to build a constituency. Accordingly, for our first demonstration project we chose to work with a large state agency having a wide range of computer systems and a long history of computerization, judging that in such an agency's files we would encounter just about every problem that might arise in dealing with existing computer installations. We looked for an agency for which networking and the Internet were already part of everyday work, so that the transfer route for archival materials would already be in place. We also sought an agency whose importance to the infrastructure of the state would make a success in that agency visible and repeatable elsewhere. Finally, we sought an agency with which we had worked for a long time, that had an officially-appointed records officer, and whose paper records were already reasonably well scheduled. Our choice fell on the Department of Health, one of the oldest and largest agencies of Mississippi state government and one with broad experience of computing applications due to its long-sustained support by Federal grant monies and mandates.

Project proposal

The project proposal submitted to the National Historical Publications and Records Commission outlined four aims:

- To define the scope of the task by surveying state agencies' electronic records creation and maintenance policies.
- To elicit discussion of the conceptual, economic, and technological restraints on electronic records preservation with other state agencies.
- To cooperate with the Mississippi Department of Health (MDOH) to devise and test specific strategies for the long-term preservation of electronic records.
- To work with the Department's State Records Center and Official Records Section to develop and disseminate standards and guidelines to facilitate the long-term retention, storage, and continued accessibility of permanent electronic records.

Each of these aims has been pursued during the grant period by a varying staff of four, combining training and expertise in records management, archival appraisal and description, and computer technology.

Step one: Defining the scope of the task

Survey of state agencies' electronic records creation and maintenance policies.

We first planned to survey state agency electronic records usage and maintenance policies. Using the Joint Legislative Budget Committee Recommendations for Fiscal Year 1998, which detailed FY 1996 actual legislative appropriations, all state agencies, boards, and commissions receiving a General Fund appropriation were included in the sample. In addition, all state agencies, boards, and commissions receiving a Special Fund appropriation of $1 million or more were included in the sample. These lists were then combined into a "working list." From the working list, each agency, board, or commission was reviewed to determine if the entity was actually part of a larger state agency. For example, the Rice Promotion Board is part of the Department of Agriculture and Commerce. Except for the Mississippi Bureau of Narcotics, which receives a budget allocation line item without reference to the Department of Public Safety (of which it is actually a part), boards and commissions which are part of a larger state agency were not included in the sample. Although state universities and community and junior colleges were eliminated from the sample, the University of Mississippi Medical Center was included due to its involvement in the Division of Records Management's state agency program. Finally, the Office of the Lieutenant Governor was included in the survey because of the Lieutenant Governor's position as leader of the Senate. Of 142 state agencies, boards, and commissions listed with the Office of the Secretary of State for inclusion in the *Mississippi Official and Statistical Register*, questionnaires were distributed to 63 (44.37%). The following state agencies, boards, and commissions were included in the sample:

1. Beauvoir Shrine
2. Board of Animal Health
3. Board of Community and Junior Colleges
4. Board of Nursing
5. Board of Trustees of the State Institutions of Higher Learning
6. Mississippi Coast Coliseum and Convention Center Commission
7. Commission on Judicial Performance
8. Department of Agriculture and Commerce
9. Department of Banking and Consumer Finance
10. Department of Corrections
11. Department of Economic and Community Development
12. Department of Education
13. Department of Environmental Quality
14. Department of Finance and Administration
15. Department of Health
16. Department of Human Services
17. Department of Information Technology Services
18. Department of Marine Resources
19. Department of Mental Health
20. Department of Public Safety
21. Department of Rehabilitation Services
22. Department of Transportation
23. Department of Wildlife, Fisheries, and Parks
24. Educational Television Authority
25. Emergency Management Agency
26. Employment Security Commission
27. Grand Gulf Military Monument Commission
28. Insurance Department
29. Military Department

30. Mississippi Arts Commission
31. Mississippi Bureau of Narcotics
32. Mississippi Ethics Commission
33. Mississippi Fair Commission
34. Mississippi Forestry Commission
35. Mississippi Gaming Commission
36. Mississippi Legislature (Legislative Budget Office)
37. Mississippi Library Commission
38. Mississippi River Parkway Commission
39. Mississippi Supreme Court
40. Mississippi Tax Commission
41. Office of the Attorney General
42. Office of the Governor
43. Office of the Governor—Division of Medicaid
44. Office of the Lieutenant Governor
45. Office of the Secretary of State
46. Office of the State Auditor
47. Oil and Gas Board
48. Pat Harrison Waterway District
49. Pearl River Valley Water Supply District
50. PEER Committee
51. Personnel Board
52. Public Employees' Retirement System
53. Public Service Commission
54. Soil and Water Conservation Commission
55. State Port Authority at Gulfport
56. State Treasury Department
57. Tennessee—Tombigbee Waterway Development
58. Tombigbee River Valley Water Management District
59. University of Mississippi Medical Center
60. Veterans' Affairs Board
61. Veterans' Home Purchase Board
62. Veterans' Memorial Stadium Commission
63. Workers' Compensation Commission

Before we created and carried out the survey, we already knew from the (paper) records management experience that on the whole the management of paper records in Mississippi state government tends to favor those whose formal and permanent keeping is mandated explicitly by law (such as records relating to private property) or regulated by professional practice (such as legal briefs), those that pertain to the government itself (such as the documentation of the legislative process and so-called "vital" records without which agencies could not operate), and those that record the actions of government in regulating the citizenry (such as records of the proceedings of the justice system)--just as the foregoing discussion of American government recordkeeping would suggest. Adopting a Jenkinsonian position of noninterference, compounded by generations of concern primarily with private papers, the Department adopted for its program of records management a relatively reactive practice that depended upon requests for scheduling from agencies. This was not surprising, given the failure to obtain adequate funding to carry out the complete scheduling of agency records within a short time or to adequately staff the program to do it over a finite long term. It has meant, however, that during the sixteen years of the program's operation to date, with an

average of only two records analysts employed during the whole period, it has failed to achieve the goal even of scheduling all state agencies once, far less of carrying out repeat scheduling to follow up on agency reorganizations. To date only 62 out of 142 agencies, boards, and commissions have any schedules at all, and few of those are completely scheduled.

The Department's modern programs in official records and records management, like those elsewhere, have been based upon business models rather than models of historical evidence incorporating recent developments in social history, such that collections policies have tended to ignore or approve the destruction of the very records that may be the only ones to document the history of ordinary people in Mississippi, including the very large databases that have been created to aid in the provision of most social services. Further, collection of bulky "modern" records has always been constrained by the state's failure to provide adequate housing for the records of state government, and as a result the Department has adopted collections policies that view the permanent retention of modern records as generally undesirable with the exception of those records that constitute the official (and generally favorable) representation of agency actions, as have most other archival repositories.

We anticipated that the state of electronic recordkeeping would share the qualities of paper recordkeeping but would be much worse, and the survey provided no pleasant surprises.[130] In general, it is clear that virtually no preservation of electronic records, apart from the contents of legacy enterprise databases that are still in operation, has taken place since the beginning of computer-based automation programs; if electronic records were deemed important, they were reduced to paper and filed. On the other hand, agencies are interested in the possibilities of making, using, and keeping records in electronic form, as the oversold popularity of imaging projects has demonstrated. We solicited and received free-form comment on the matters raised by the questionnaire, and these comments revealed that agencies are becoming uneasy about the generally undisciplined nature of computer-based records creation and are ready for the Department of Archives and History to take leadership on this issue.

Survey of computing project inventories

From the first years of its creation, the Central Data Processing Authority reported on its activities on behalf of other agencies. As a result, it was possible to obtain a list of at least the major data processing projects carried out for the major agencies from a relatively early date (1973). Along with the process of developing and preparing the survey questionnaire for distribution, we also reviewed the sequence of CDPA/ITS annual and other reports to recover an inventory of those major projects.

1973? State Tax Commission: Various applications (germs of later STARS); car title/registration system
1973   Legislature: Legislative Information System (continues as CICS application to the present)
1977   Budget Commission: Financial Management System (germs of SPAHRS to handle personnel and SAAS to handle remaining financials)
1980   Department of Human Services: Welfare management system planned (MAVERICS); 1986 implemented
1986   Secretary of State: Uniform Commercial Code (UCC) implementation
1987   Department of Education: Teacher Certification system on 3B2, converted to mainframe and ADABAS by 1988
1987   Department of Health: Patient Information Management System (PIMS)

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[130] The survey report and the questionnaire may be found at www.mdah.state.ms.us/arlib/ersurvey.html.

1988 Department of Finance and Administration: SAAS rebid; implementation begins in earnest 1990
1988 Department of Education: Child Nutrition (TMATT)
1990 Secretary of State: UCC imaging application
1992 Department of Human Services: Child support (METSS) and jobs (JAWS) systems
1992 Secretary of State: new UCC system
1993 Department of Finance and Administration: Executive Information System (MMRS)

Many of these projects have proceeded by fits and starts, with some obvious losses of data along the way, a pattern attributable both to the alleged *sui generis* quality of state government systems (frequently tied to idiosyncratic state law) and to the uncertainty of funding from year to year and administration to administration. These factors made it clear to us that legacy databases needed serious attention in our guidelines. This review also made it plain, as the annual reports enumerated the first acquisitions of microcomputers for individual small applications within agencies, that desktop records creation was already escaping from proper regulation as early as 1984, in spite of CDPA's efforts to centralize state computing on its mainframe. By 1992 PCs were so numerous and so integral to agency work that multiple requests for the implementation of LANs were beginning to appear in the report. The survey showed that while desktop file creation is now a significant area of concern, legacy databases are not, perhaps because they remain in current operation and their failure to preserve history files is not so visible to those who use the current data every day; the long-term management of these data has fallen by default into the routine backup practice of information technology staffs.

Survey of existing state websites

As we began work on guidelines for various types of electronic records, we also decided to carry out an informal inventory of state government websites to discover what kinds of information were being presented on them and whether it was possible to estimate how much of it might be archival. A majority of state government departments had web pages, but most were rudimentary (as of spring 1999) and clearly an evolutionary outgrowth of a simple page design class offered by ITS several years ago. For those departments that went beyond one or a few simple pages, several significant uses of websites emerged:

1) delivery of public relations materials (all websites)
2) posting official records of various kinds for their informational value to the citizen and to comply with legal requirements (most of the larger websites belonging to very large agencies or those headed by elected officials do this)
3) provision of actual services through transactional systems (only a very few sites do this to date because of the lack of a digital authentication infrastructure)

Clearly these are very different applications, that can be considered in terms of their archival value in very different ways, but equally clearly they all constitute public records, since they are produced in the normal course of government business. It seems likely, however, that the actual transactions supported by the web, if they produce archival records, will be preserved in the form of an underlying database.

Records custody, security, and departmental income

One aspect of the custodianship issue, as we have seen, is the issue of power that custodianship actually confers. This is an issue that has played out repeatedly in practical terms when agencies have been reluctant to adhere to uniform requirements for archiving their records, even though the Records Management law only too clearly deferred authority in every case to previously existing law, without trying to rationalize the various practices or indeed the numerous overt exclusions from the law. In some cases agencies are enjoined to retain records indefinitely or for a long time for legal reasons, usually connected with privacy concerns. Yet although large blocks of records of this kind, such as personnel or medical records that are increasingly retained in electronic form, can legally be archived after a specific period, the difficulty of doing this with a large mass of paper records has tended to lead to schedules that called for mass destruction.

In other cases, agencies wish to retain records in their exclusive custody, without even parting with a security copy, because the records, many of which for privacy reasons are exempted from the Public Records Act, are a source of income vital to agency operations. This has been the case, for example, with the Health Department's custody of birth and death records, which are supplied to the public for a copying fee that contributes to the recordkeeping operations of the office. Older records in the death records series were sent to the Department of Archives and History until 1993 (thus at present the most recent in MDAH custody date to 1943), but not even those are now placed in the Archives because of the potential revenue they may yield. It is also clear that many agencies are beginning to think of delivering records that they hold via their websites as a means of constituency-building, such that they are unlikely to forfeit custodianship until the records have lost current interest. This need not be a problem, of course, since the object of all our efforts should be to give citizens access to public records, but schedule regimes will need to take delayed transfer of custodianship into explicit acount and allow for renegotiation should conditions change. The ultimate outcome of these practices, of course, will be that the state archives will have in its custody only those records that are not a current source of reliable revenue, which means that the Department of Archives and History cannot be expected to fund the maintenance of such records from the revenue they may generate.

Step two: Discussing electronic records issues with other state agencies

Electronic Records Study Committee

Some of these issues had been discussed before, which assisted us in devising our questionnaire. In 1995 an Electronic Records Study Committee (ERSC) was created by the Information Resource Council, a consortium of departmental heads, including our own director, convened by the new Department of Information Technology Services. This Committee was made up of a group of information technology professionals from the IRC agencies and was chaired by the director of the Mississippi Automated Resource Information System, the state's GIS facility. The Committee's first effort was to prepare legislation enjoining agencies to provide access to public records in the form in which they were used within the agency: in other words, agencies could not deny the public access to electronic records in electronic form. This legislation was passed, in the form of an amendment to the public records law, in 1996.

The Committee also worked on legislation to support digital authentication of electronic records in order to permit electronic commerce within the state. Digital authentication interested us because it is an indispensable tool for the safe transfer of records to archival storage and the provision of access to guaranteed authentic records. Such legislation was envisioned as permitting the implementation of authentication guarantees for electronic records through encryption and key escrow schemes. These issues were brought to legislative action in the spring of 1997, when the Secretary of State's office was directed to come up with an adequate digital signature infrastructure for Mississippi state government. Since that time the Office has been working actively with Federal-level initiatives to implement a broad law, has proceeded to set itself up as approving escrow agents for key escrow schemes, and is now in the process of putting such a program in place.[131]

The Committee made significant strides in raising the issue of custodianship--the recognition that electronic records are different from paper records in that identical such records may exist in many places at the same time. Recent legislation requires agencies to give timely access to any public records in their custody, whether created by themselves or other agencies, and agencies represented on the Committee wrestled with the problems raised by that requirement. It is clear that most agencies might be willing to take responsibility for supplying public access to a limited number of their own public electronic records, but they do not want to do this in perpetuity nor can they justify doing it for most records on cost-benefit grounds. Archives and History, the Committee agreed, is going to be expected by many agencies to serve this function, taking custody of such records early in their lives if only to supply public access. As noted above, however, the records likely to be treated this way are only those in which public interest does not translate into an additional funding source. Furthermore, if agencies are to refer the access duty to Archives and History while retaining a copy for administrative use, the law will have to be changed to accommodate such an arrangement.

Finally, the Committee spent some time discussing creating an online catalogue of electronic files, modeled on the Federal Government Information Locator Service (GILS). MARIS had already prepared such a catalogue to make agencies aware of the existence of GIS coverages,[132] so the experience was there, but the details and organization were never worked out. It was clear again that an agency like MDAH would need to take leadership in this area.

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[131] Personal communication from Clay Kittrell, Office of the Secretary of State, 10/15/99.

[132] Mississippi Automated Resource Information System, *Mississippi Directory of Digital Geographic Data* (Jackson: MARIS, January 1995).

The Web has driven developments here, too, as the Department of Information Technology Services has recently undertaken to develop a portal through which all public interaction with agencies may take place, although it is not yet clear that this project will undertake to provide the kind of comprehensive listing that a GILS should represent.

The issue of custodianship has been difficult because it brings in its wake a whole host of documentation issues implied by the revolutionary change wrought by the new characteristics of electronic records. Among the issues discussed under this heading by the ERSC were the following: How do we guarantee that the extraordinarily mutable electronic record is authentic, and can (or should) the originating agency be trusted to do so? If state employees are legally "state actors" and all their acts are official, when do the records that document those acts become official? Finally, real and virtual LANs and other telecommunications methods are making conventional organizational charts and institutional histories, with their implied dependence on paper flows, obsolete as descriptions of the actual process within agencies; how, then, do we document process for long-term understanding of the documentation we keep? Particularly when that process may change frequently with changes in administrative leadership or initiation of new projects.

It is clear that custodianship is much simpler for paper records: the custodian is the person who has the records. Yet from the beginning our own practice has distinguished between custodianship and ownership in the handling of paper records in our State Records Center:

- *active records* are those that are owned by the agency and kept in it for use: owner and custodian are the same
- *semi-active records* are entrusted to the Records Center as custodian, but the agency retains ownership and can request the return of the records at any time
- *inactive records that are not scheduled for disposal* are sent from the Records Center to the Archives, and ownership is transferred at the same time: again owner and custodian are the same

In view of the new issues we have seen in ERSC discussions, however, it is evident that if the authenticity of electronic records can be assured and the making and use of multiple copies by agencies and archives can be routinized, it should be possible to redefine ownership and custodianship while redefining or eliminating the category of "semi-active records."[133]

Electronic Records Advisory Panel

As our project developed, the Information Resource Council was discontinued, leaving the ERSC without a home or indeed a brief. We envisioned drawing on the membership and good working relationships developed within the ERSC to create a new group, directly related to our project, that would serve as a sounding board for our efforts to develop a set of guidelines for the handling and preservation of electronic records in Mississippi state government. We thus created at the end of 1998 a group called Electronic Records Advisory Panel, carefully selected to include official representatives of agencies that share our concerns (e.g., Library Commission) and agencies who are likely to share the regulatory task with us (e.g., Secretary of State, State Auditor, Information Technology Services). We also added our consultants to the list so that they could be aware of the discussion.

We had intended that the panel be our major source of comment upon the electronic records guidelines we were developing. We had hoped that the panel would be primarily an

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[133] See the subsequent discussion of "escrow archiving."

online community, consisting of a listserv discussion group to address periodic postings from Initiative staff members and to discuss electronic records issues of interest to all its members as they arise. The initial in-person meeting was called as a result of a pressing need from the Department's Local Government Records program for an updated imaging standard for paper records, and it led to a strong and positive response from those present. Interestingly, during the course of the meeting and without any special prompting, agency representatives brought up all the major electronic records problems in the course of a wide-ranging discussion. We felt that this meant that the general course of events, combined with the visibility that we have worked toward in the project, has sensitized people to these problems. Further, the Information Technology Services representative worked with us to develop an item for the ITS newsletter (which reaches all IT professionals in state government) about the panel and our project.[134]

But we were too optimistic in hoping that most members of the panel would find an email discussion group as helpful or easy to use as we had hoped. When we came to post proposed ideas, like our development of the "escrow archiving" proposal (see below), we found that most individual members of the group were unwilling to participate online, for whatever reason.[135] Only three members of the group responded at all to our posting of the draft guidelines that were part of the grant-funded project, and even these sent their comments to us outside the context of the listserv. This experience has made it clear that unless individuals are specifically assigned to carry out such tasks and empowered to speak for their agencies, or participation actually interests or serves the interests of an individual, he or she will not participate voluntarily: unfortunately, to far too many government employees electronic records are not only not a sexy topic, they also look like causing a whole lot more work, with no additional funding and no corresponding reward.

Issues remaining to be discussed

As we look toward the continuation of our activities in the form of an official program of the Department of Archives and History, we plan to institutionalize the Panel as a permanent adjunct to the Electronic Records program. Many other issues remain to be discussed with our agency partners:

What is the lifetime of Common Off-The-Shelf software (COTS)? It is abundantly clear that desktop personal computers articulated in networks for resource sharing and easier communication will remain the model for Mississippi state government computing for some time to come. It is also evident that document-management software with records-management capabilities, deployed as an interface layer to desktop applications, would permit the implementation of record-creation systems that would guarantee effective and legally-defensible records management; in fact most of the research projects on electronic records have assumed that such an environment would be the *sine qua non* for the management of electronic records. But we also know that as long as implementing such a system represents an additional cost, the very fact that effective record creation (functional in the short term) is now going on just fine using PCs with no such support makes arguing for that extra cost difficult. There are signs that over time some record-management features may be incorporated into COTS. When queried, IBM acknowledges an interest in applying mainframe records-management software, using DB2 as a back-end warehouse, to the Domino environment.

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[134] Patricia Galloway, "Electronic Records Initiative in Mississippi," *For Your Information* (Winter 1999): 1, 5.

[135] It is interesting to speculate that email to an official list may seem too dangerously close to official speech, whereas--as we have seen--ephemeral oral communication is less committal because more deniable.

Microsoft may incorporate many of the elements of such a system into their products (useful metadata may now be applied with most vendors' desktop products individually, but there is no means for integrating them), but this will only be effective if agencies implement end-to-end Microsoft systems. It is clear that like NARA, the MDAH should mandate the adoption of systemic solutions, but we deem it unlikely that such a mandate would be successful unless we can make financial arguments based on the evaluation of other issues, such as decreasing efficiency over the life-cycles of existing unorganized systems and the actual costs and benefits of installing document-management systems.

What might medium-term options be for document management? Our original plans were to serve medium-term needs by adopting Internet standards to implement proper electronic records management as part of existing client-server systems. Options, however, vary for genre of electronic record, because some genres, particularly those that are *designed* to function in cyberspace, are more well-equipped with metadata than others. Hence archival webpages require attention to the structure of "historic neighborhoods" on archival websites and email need only be retained in "wide-access" email repositories that never empty[136]--but most of the metadata these records need is already a part of them because it is part of how they do their work. Databases represent a bigger problem, particularly transactional databases, but again, if the database is preserved in its entirety with historical audit trails, most significant databases have huge mountains of documentation (particularly since the Y2K scare) that include even identification of data-entry clerks. In short, these three areas are least in need of serious attention in the short term: the complexities involved are not technological but rest with appraisal, scheduling, and the will to execute the requirements of a schedule. More clearly than ever, the real problem lies with networked desktops as sources of records formerly destined for paper manifestation, since the use of COTS requires that additional steps be taken and employee work habits altered.

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[136] Although in the long term a much more efficient solution for managing millions of messages will be required.

Step three: Testing specific strategies for the long-term preservation of electronic records.

Archives Administration project: COTS, automation, and metadata

When we began to frame the real-world tasks of actually inventorying, scheduling, transferring, and maintaining electronic records, project staff took advantage of the "opportunity" occasioned by an inadvertent loss of a mailing list database in our own Administration Division, which was migrating at the time from a Novell network to a Unix-based network, to begin with an in-house project. Since no schedules at all were in place for our own electronic records, we carried out an inventory of electronic records on PCs throughout the Administration Division. Analysts from the Records Management division assisted us by updating existing schedules for paper records, most of which were approved almost immediately by the State Records Committee. This project enabled us to begin to tackle the complexity of dealing with the worst problem first--the wilderness of heterogeneous PCs and software environments on networks--and to come up with preliminary recommendations covering management and security issues for a reliable recordkeeping system in the real-world environment of COTS (Common Off-The-Shelf software).

Because our own agency's computing program has been built piecemeal on the unreliable funding characteristic of state government, we initially had to envision our task as one of reengineering to establish a manageable level of uniformity, security, and archival reliability across the PCs of the division, which are used for the different functions of executive offices, financial management, personnel management, public relations, and information technology. We accordingly formulated the following three steps, based upon best information technology and archival practices:

1) Establish **uniformity**
   Desktop operating systems
      schedule migration to single standard
   Applications (including network clients)
      Eliminate unneeded applications
      Establish uniform rules for prophylactic application installation
   Desktops: set up a standard layout and lockdown method
   Directory trees
      Standardize core, including set aside "private" workspace
      Document additional entries by office
   Create and install templates with standard footers for standard applications
   Establish server backup methods and backup directory
   Create separate server directory for archived data
2) Establish **security**
   Implement and document multilevel password protection on all PCs
   Implement and document standardized backup procedure
   Implement and document standardized archive procedure
   Train employees on use of individual file-protection and file-sharing features of network
3) Establish **archival reliability**
   Establish maintenance schedule for PCs, server
   Establish standard "safe computing" practices and train employees:
      Shutdown practices

Running practices
Train employees on security practices
Check existing schedules for filing practices
Perform experimental scheduling based on paper models
Develop employee recordkeeping manual and train on "electronic filing"

On the basis of this to-do list, we articulated a specific set of recommendations that we felt would meet the immediate concerns that had resulted from the loss of the database, while at the same time serving as the basis for a set of practices that would support reliable electronic recordkeeping:

Recommendations: Administration Division PC Inventory/Analysis
Software Management:
* Create a Master Inventory List. Record all computer software on each machine and update as software is added or deleted. This inventory should be maintained by the DP contact in each division to ensure compliance with software licensing.
* All software distribution media should be kept by division DP contact (attempt to move toward a centralized server version for software distribution).
* All software that is not of use to the employee, including especially all games, should be removed from the employee's computer. When a new machine is assigned to an employee, such software should not be loaded. The removal of software should be done with the proper uninstall software. Deleting will not properly remove all files.
* Whenever possible, standardize on one version of software. (e.g. Quicken) Using many different versions of the same software will create problems in transferring files between users. All employees should have the same Internet and email access software to ensure 100% communication flow between all Department of Archives and History Divisions.
Working Data File Management:
* The division should develop a standard directory structure which will be adhered to by all employees. The structure should be similar to standards of other divisions. Similarly structured directories will help to determine record groups, storage, retention and aid in the retrieval of electronic records.
* All employees should, at a minimum, back up their computers on a weekly basis. A simple backup schedule such as the following should be used:
First Friday of each month: full backup
Succeeding Fridays of each month: incremental backups
* All backups should be made to the divisional server, where possible. The employee responsible for the server is then responsible for weekly backup verification and offsite storage of the backup medium. Backups from PCs should be done using standard Microsoft tools under Windows 3.1, Windows 3.11, or Windows 95. Backup routines should be documented.
Security:
* To ensure the security of each PC, the following system files should be copied and kept in a secure location along with the boot disk for each machine (if any of these files should change, these files should be recopied and stored):
SYSTEM.INI
WIN.INI
AUTOEXEC.BAT
CONFIG.SYS

* All machines should have antivirus software installed, and it should be used on a regular
      basis. Employees should not use files created elsewhere, even on another machine in
      the same office, without scanning them for viruses.
* Passwords should be established separately for each machine and changed on a regular
      basis to ensure restriction of access.
Long-Term Software and Data File Management:
* An Employee Departure Policy for computers should be developed and implemented as part
      of the exit interview process, to include the following steps:
            Review the computer to analyze file structure and file titles
            Document what files are present and where they can be found
            Determine archival value of files
            Transfer inactive files of archival value to permanent electronic retention
            Transfer active files to another employee or leave on the system
            Remove unused software
            Update computer inventory list
* Documents of archival value being transferred to permanent storage should be copied using a
      simple DOS copy.
* A Transfer Policy for computers should be developed and implemented, to include the
      following steps (these steps will apply whether or not the "old" system will be recycled
      for use by another employee):
            Review old computer to analyze file structure and file titles
            Determine archival value of files
            Copy all needed files from old system for placement on new system
            Transfer inactive files of archival value to permanent electronic retention
            Remove all inactive files of no archival value from old system
            Remove all unused software from old system
            Update computer inventory list
            Effectively erase all storage media of old computer

This set of recommendations, formulated as a set of normal IT practices, would become the
basis for a refined set of implementation suggestions in the finished guidelines. Clearly such a
complex set of procedures is attributable to the fact that we were dealing with records that were
not previously scheduled, but they all represent considerations that must be embodied as
business rules in newly-deployed automated systems. They also reveal the significant amount
of intervention that working with COTS software products requires.
        In essence, the orchestration of COTS products to enable the creation of reliable
records requires the integration of three notional entities: essentially "private" PCs used by
individual record creators; "group" servers used for file-sharing, file backup, and joint record
creation; and "archival" servers used to store records destined for permanent preservation. In
practice, we implemented these three virtual entities using PCs and a single server supporting
the MDAH Administration Division network. This server is configured with two file systems: one
used for routine file backups and the other used for storing archival files. On each PC we first
scheduled all records created on it. We then established a standard file structure that reflected
both work process and records series. We determined how metadata application was supported
by the standard desktop systems in use and automated it as much as possible. We worked out
a set of file-naming conventions that enabled us to automate both backup and archiving
procedures. At present we are establishing a handbook for employees that explains the simple
steps they need to take to comply with the process. Last and still in process, we are
establishing an automated program to gather archival files at regular intervals and transfer them
to the Electronic Records file server to be permanently preserved.

This all sounds simple enough, but to establish these steps we had to make our own decisions with reference to many of the issues so far discussed. Archival theory and Mississippi law point to a definition of record that emphasizes records produced *in the normal course of government business.* We intend that the efforts we expend to establish routinized electronic record creation and filing procedures will establish the reliability of records produced by our agency. Since we feel strongly, for the reasons already discussed, that centralized custody and maintenance are important for preserving the authenticity of the records, that is the kind of scheme we are putting in place for our own records.

We have spent a good deal of time throughout the project in deciding what kinds of metadata electronic records require in order to be legally preserved as records in the context of Mississippi government. First we should say what we mean by the term. Since we acknowledge that the term itself was taken from the information technology field, we prefer to use it in its generalized meaning, as "data about data," and hence from our point of view it embraces a wide variety of data, not just that generated by the record creator at time of creation. We also believe, as discussed earlier, that the record accumulates authority as it progresses through stages of care and use, and that therefore the electronic evidence of that care and use also needs to be preserved with the record. That being said, it is clear that we need to define precisely, in both theoretical and practical terms, specific kinds of metadata and their authors.

Our reading of Bearman's work has convinced us that every individual electronic record requires enough granular metadata attached to it to return it to its fellows if it becomes lost, so determining how to capture such data in the record's original context or to add it later was a serious problem that we saw we had to solve. We took several steps.

First, drawing on discussions of many years' standing regarding life-cycle tracking of records, we assembled all the kinds of data we ever collected about the official records in our care, from inventory through scheduling through accession, description, and finding aids. At first we concentrated on the metadata required to place a given record within its series and to identify it in the context of its functioning, that is, the kind of metadata that a paper record in a filing cabinet in an office of a government agency already has, that office workers supply on a daily basis without thinking about it. But we soon realized that we would have to consider the whole continuum (and in doing so, would for the first time begin to automate the management of paper records throughout their life cycle in a seamless way) in order to discover *who* would need to generate what metadata *when* as we designed a reliable COTS system. Accordingly, we collected all the instruments we used at any stage and created a metadata superset that represented all the views of a record that any part of the Archives had during its life cycle. We transcribed all those views into a single table and reviewed it in detail, establishing definitions for each item of data.

To establish such definitions we made use of three standards: Dublin Core, which was and remains our core standard for basic metadata to be associated with a single record; the closely-related UBC metadata set; and the expanded metadata set developed by the University of Pittsburgh project. Once we had laid out a table with all the metadata and all their definitions, we defined several kinds of metadata.

1) Obviously certain items of metadata carry through from the record's creation to its use: those items that are *metadata intrinsic to the record*, that participate in its ontological status *qua* record, that guarantee its reliability and authenticity. These items of metadata should ideally be attached to the record automatically by the software with which it has been created, and in fact we found that most individual software applications in a desktop context do provide for this to happen. These metadata are those to which strict constructionists restrict the term "metadata."
2) Other metadata, which amount to the record's "file folder" and "file drawer" and are related to its *functional records series metadata*, have to be added in some way that can become

routinized so as to become part of the "normal course of business," but are not normally added by commonly-used applications. In our view, these items of metadata, which serve to document the bureaucratic and computing environment in which the records were generated, should be added at the time the records are set aside, though they may have to be added by the information technology staff of the agency rather than by the originating office.

3) *Records-scheduling metadata* pertain to whole series of records, should be retained in historical databases (with all amendments and a record of compliance), and need not be added to individual ones, as long as the individual record incorporates a pointer to series metadata; yet how the record articulates with the schedule, which has in turn enhanced its recordness by identifying it, does become an important part of the record's life history and should be retained with the record if the record is retained.[137] Individual records should also have their date of archiving added (and period of escrow if applicable).

4) *Records-situating metadata* also mostly pertain to whole series also, though they may be more granularly subdivided; these metadata are added to enhance access, but because they are added after the fact they are also interpretive. Such metadata as these are usually conveyed to the researcher through finding aids of various kinds.

5) Finally, over time permanently-retained records are consulted and cited, and the record of their use further enhances their authority (or fails to do so). *Records-use metadata* therefore also needs to be retained at whatever level is practical; considering that electronic records are ideally accessible electronically, the audit trail of their use should be retained in perpetuity.

We found that although for granular metadata attached to the record itself we could make use of the basic Dublin Core, neither this simple metadata set alone--without the use of subelements now under active discussion--nor the UBC set were adequate to encompass all the kinds of metadata that we actually use at present, although at present our paper administrative systems never aggregate all the collected metadata and often duplicate its gathering. Our goals with this part of the project are:

1) To establish a real-world metadata superset that constitutes all the metadata used by the Archives in managing archival records.

2) To map this set onto established standard metadata sets, drawing from Dublin Core, UBC, and Pittsburgh metadata sets. In practice, we use Dublin Core subelements where possible and implement our metadata elements in the same DTD format, but borrow at will from the Pittsburgh set, using its detailed subelements as notional "drop boxes" to identify elements already in use by us but not defined in existing Dublin Core or UBC sets.

3) To institute uniform naming conventions for metadata items across all the records-management instruments used throughout the Archives.

4) To determine which elements are gathered when and by whom, and to suggest ways in which duplication can be eliminated. Where specific elements are changed in the course of archival processing, we are attempting to establish a means for retaining the history of metadata alterations.

5) To implement the uniform set of metadata elements across computer systems used by various segments of the Archives, such that multiple tables can be shared and "finding aids" can be superseded by access to the entire superset as required by researchers.

The point of this effort is to decide who has responsibility for what metadata at what point in a record's history and to make certain that the association of metadata with records

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[137] We also feel that it is indispensable to retain a record of records' having existed, even when they are in fact destroyed: the meaning of records that are preserved is diminished if there is no record of the destruction of those that formed part of the context.

takes place in as routinized and automated a way as possible, both by external agency employees and by us, given the foreseeable lack in the short term of document-management systems that can incorporate retention schedules in the agencies. This is important because we see the schedule for electronic records as a crucial instrument for enshrining such practice in a concrete agreement. In Mississippi a records schedule has the force of law and is capable, if agreed to by the originating agency, of binding that agency to meet particular requirements of practice. We intend to stress, however, that the Department of Archives and History is willing to support agencies in these efforts by working with their technical staffs to arrange the addition of specific kinds of metadata at specific stages of agency custody.

Were we able to implement all of this for our in-house project during the grant period? The short answer is no. Most of the IT practices were either already in place or have been put in place, but scheduling and work on formalizing recordkeeping practices has been set aside at times in favor of other parts of the project and is still not complete. We have to admit that it is and must remain a work in progress, not because we cannot see how to to it or what exactly to do, but because it is not something we alone can do: record creators must act in specific ways, and their work habits have to be altered somewhat. Recordkeeping habits of the different offices falling under the Administration umbrella at the Archives are diverse, and as already suggested in the earlier discussion on bureaucracy, often determined by external professional bodies. Thus we are still working through these issues as we finish scheduling them. Further, as our employee departure and computer transfer policies reflect, constant organizational change and employee turnover necessitate a level of maintenance seldom made explicit for paper records but not so serious in their case because of their materiality.

But the exercise--dealing with the endless detail that is required to reconstruct a virtual (recordkeeping) space--was extremely salutary, given that at the beginning we actually still believed that the theoretical schemas of existing research projects might be possible in the ordinary COTS environment. We learned first that even if the employees using the systems in question are as helpful as possible, and given that we were their colleagues they were indeed extremely helpful and tolerant, leveraging COTS systems into something that attempts to instantiate the complete Pittsburgh schema or even the less demanding Dublin Core or UBC schema is not easily achievable in the kind of minimally-controlled environments that our agency itself represented, that our survey had already showed us is the rule throughout Mississippi state government, and that our study of bureaucratization demonstrated was characteristic of a governmental form in a constant state of invention. Even achieving a modicum of compliance with the notion of a "reliable" system requires a level of invasiveness and fine-grained instruction that our tolerant colleagues were not much disposed to help with, given their own duties. Weber was right in saying that even destroying the files would not much disturb office routine, for it is clear that hardworking employees have to be given more than a reason to change their work habits, and they have to do more than understand the change: they need to be charged with making the change as a specific task that they must perform. Our own agency, therefore, provided us (and continues to provide us) with a laboratory to test the feasibility of methods before foisting them upon other agencies.

Department of Health project: Immunization and territoriality

While reviewing project plans and experiencing the cold-water splash of attempting to set up a system in our own agency, we were undergoing an introduction to the wide range of the Department of Health's electronic systems, receiving training on the Patient Information Management System (PIMS) and visiting central offices in outlying clinics. We soon realized that encompassing the whole of the Department of Health's vast and heterogeneous domain would simply be impossible during the grant period. We therefore decided to focus on one specific segment, and we were advised to choose the Immunization program. The child immunization program in Mississippi is charged with making sure that all children are properly immunized, using school admission requirements to enforce the requirement. The program, which is federally-funded, has its own independent network for office automation and a server being used for development of a new portion of the State Immunization Register. Immunization's network is also interconnected with the wider Department of Health network for Internet and email service. In addition, Immunization participates to some degree in the statewide mainframe-based PIMS system, into which data on immunizations performed are entered from county clinics. Thus by targeting Immunization, it was clear that we could tackle records creation in nearly all the major kinds of systems to be found at the Department of Health and could create a set of recommendations to be used for the entire Department. As a plus, its federal funding and recent reorganization suggested that we would not encounter the problems of piecemeal development that we had seen in our own case.

Our first task, then, was to inventory the program's electronic records. With the offices of Department of Health staff members who had worked with us already in familiarizing us with the PIMS system, we had made our first out-of-house test of a new inventory instrument developed with our Records Management staff (see below, Step four). The PIMS staff gave us additional feedback on the process and supplied information on the data dictionary for the State Immunization Register that is a part of PIMS. We then met with the director and administrators of the Immunization program to discuss the steps we would take in doing the inventory, and we prepared an institutional history of immunization by the Department of Health in Mississippi. Then we set up an initial visit to inventory records on the director's PC.

This initial visit proved that not all employees would be as receptive to the inventory procedure as were our own; it revealed the degree to which personal computers on office desks are indeed considered personal. The director of the program found the inventory process alarming, probably because in a perfectly acceptable way there were personal files on the machine, but also because of the degree to which these machines elicit a certain proprietary attachment.[138] Further, as we found out only later, the program director had not personally chosen to have the program serve as our guinea pig; in fact, we found ourselves in the midst of several internal political issues.

In response, we prepared a report on our visit and a written description of our goals and procedures for the benefit of the Immunization director. This turned out to be a salutary exercise in any case, because in the process we reviewed existing schedules for paper records in the Immunization section and began to target our inventory to areas where we knew archival records would be found rather than hunting for them from scratch. To give this procedure a sound basis, we asked analysts from the MDAH Records Management Division, in cooperation with the Records Officer at the Department of Health, to reschedule the paper records of the Immunization division. Once the new paper records schedules had been adopted by the State

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[138] For the quite extraordinary attachment elicited by personal computers, see two books by psychologist Sherry Turkle, *The Second Self: Computers and the Human Spirit*, and *Life on the Screen: Identity in the Age of the Internet* (Touchstone, 1997).

Records Committee, we were ready to complete the inventory of relevant files on the Immunization network.

During this time, we met with technical staff supporting the Immunization division at several levels: on their own network and server, on the Department of Health network and servers, on the mainframe PIMS system, and in the county clinics. These staff were found to be highly cooperative, since ridding themselves of the necessity for maintaining old records is a welcome prospect. Detailed information about the new system designed to capture Immunization Register data from private providers included an inquiry about the archival nature of the data that would be thus captured. Technical support staff for Immunization's file server were more than happy to agree to assist in planning for secure data transfer to the Electronic Records Initiative server. This was only one example of many responses from technical staff that made it clear to us that the data assembly and transfer task is the easiest part of electronic records archiving.

Department of Health project: Information Systems Consultant and escrow archiving

In the end, however, we were thwarted in proceeding to completion with appraisal of the electronic records held by the Immunization division by various problems stemming apparently from the internal politics we confronted. We therefore backtracked and began working with the records of the Office of the Information Systems Consultant, located organizationally at a much more exalted level as part of the Office of the State Health Officer. This office is responsible for all IT planning in the agency and for its email and intranet systems. Our aim became to produce a demonstration project that could then be cloned throughout the Department of Health. To that end we inventoried both paper and electronic records of that office and obtained word-processing and email samples from them for experimentation and analysis of metadata elements.

Our work in this office with desktop PC files produced by miscellaneous applications and not managed by an electronic document-management system raised some serious problems of bringing the records creator into daily participation in retention decisions regarding the records he or she creates. Further complications come from the fact that so much use continues to be made, even in this technology-oriented office, of printed versions of files. The desire to make this process less complex, to permit records to be archived in electronic form, and to relieve the records creator from the burden of having to micromanage the disposition of individual records led us to develop the concept of "escrow archiving." The basic idea involves a sort of dual schedule for archivally valuable records. We distinguish between when the document becomes a record (when it becomes administratively active, when it achieves "recordness") and when it becomes administratively unnecessary. Until the document becomes a record, the agency would take responsibility for migrating it, but once it becomes a record, it would be placed in escrow at the Archives. What that means is that the Archives would simply take a secure copy of it for permanent storage, convert it to a neutral archival format, and take responsibility for migrating it and for guaranteeing that its content has not been changed. The records creator or agency could keep a copy of the record for reference purposes, and could modify or delete it at will, but would not be required to maintain it in original form nor to migrate it to new formats. Ownership and control of the copy kept at the Archives would remain with the agency until the relevant schedule tags it as administratively unnecessary, after which both ownership and control would pass to the Archives. Finally, during the escrow period, the agency could choose to provide public access to the record or the Archives could do so for the agency by prior agreement written into the schedule, although, as discussed above, this practice would require a change in the public records law to allow a specific designated access point for records existing in multiple copies. This concept, which was discussed and refined online with the

advisory panel, represents the beginning of a more flexible notion of scheduling that removes from agencies and individual employees the burden of maintaining in pristine form records that are either no longer currently needed or that will become input for further work. In essence it does away with the awkward category of semi-active records that is so costly to deal with in any medium.

Department of Health project: PIMS and conditional scheduling

We are also continuing our work with the Department of Health's major multi-divisional patient-service database, PIMS, created by an outside vendor in the late 1980s. This database is used daily as the interface with all the public health clinics in the state. Its data are destined for long-term retention in the agency, where data processing staff are in the process of porting older data from it to an archival database called SAR, from the same outside vendor. As SAR is tested, a process that has been delayed repeatedly (as already noted, a common characteristic of government mainframe-based systems) for more than a year, we have arranged to obtain a copy of the dummy data they use for testing to use for our own analysis and experimentation. Scheduling this particular and very visible enterprise-level database, which as a whole has considerable informational archival value, is allowing us to carry out a case study of "non-custodial" or "delayed custody" solutions for governmental electronic records and at the same time to address issues of confidentiality in the long-term preservation of medical records, which may require anonymizing through redaction or encryption of specific fields. It has already become clear to us as a result of work already done that non-custodial solutions in government will have to be continuously revised as decisions change over time: nobody in the initial planning of PIMS ever envisaged the need for an agency archival system like SAR until the capacity of the PIMS system became strained; nobody now has any idea if there is a time limit to how long the Department of Health will want to maintain SAR. In addition, discussions initiated on records management online lists have shown us that the scheduling of databases is far from a solved problem. Our work with PIMS is making these issues explicit.

Department of Health project: Other results

Having sampled email messages from the Office of the Information Systems Consultant, we are now in the process of scheduling Department of Health email as an escrowed series. Plans are in place to supply the departmental webmasters with Dublin Core templates for marking up their pages and to receive pages that are removed from active display. Finally, as a result of the work done so far to bring paper and electronic records into unified schedules, which revealed both just how outdated existing paper schedules were and how simple the scheduling of electronic records could be, the Department of Health has requested that we undertake to reschedule all of its records to include electronic records integrally. This request, which we had hoped for, will enable us to clone existing solutions and to revisit problems that remain unsolved.

Other serendipitous efforts

Once word began to get out that we were developing an electronic records program, aided by our work with other agencies, we began to receive inquiries: indications of interest in making use of services that we might provide and in seeking guidance with projects. The end of the grant-funded project coincided with the end of century and millennium, and we were asked to take custody of the materials from the closeout of Information Technology Services' Y2K office, which had been in existence for some three years. It also coincided with the end of a

political administration, and we were able to participate in taking archival custody of the records of an outgoing governor. Governor Fordice used computers very little, but he did have a website, which is in the process of becoming our first mothballed site. We also participated in setting up schedules for the office of incoming governor Ronnie Musgrove, and we expect that this younger exponent of wiring Mississippi schools for Internet access will lead in the broader use of electronic records in the governor's office. Finally, the staff of the Electronic Records Initiative have begun to work closely with other Archives staff to develop in-house standards for preservation imaging, to manage the imaging system supporting public access to the Sovereignty Commission records, and to begin to establish a broader view of metadata as a continuum applying to the management and use of both electronic and paper records. Staff have also participated actively in the planning of the computer network and data storage infrastructure to support an electronic records program in a new Archives building, currently being constructed to open in 2002.

Step four: Developing standards and guidelines for electronic records

As we have said many times already, our standards and guidelines had to start from where we find ourselves: though we may feel that legislative action should be taken to support and mandate better recordkeeping practices in Mississippi state government, we cannot expect that we will be successful in achieving that goal immediately, and it is useless to plan only for the ideal situation. We therefore took the position that we would be looking for standards that were as non-proprietary, and therefore as widely-available and inexpensive as possible: standards that were in fact within reach of most agencies.

Records management staff are working closely with us in the design of top-level metadata and its subdivision into various levels of detail: together we have designed a new records schedule form and implemented it as a database that will interlock at one end of the metadata continuum with record-level metadata and at the other with archival series-level description, and that will also accommodate paper records. In addition to the detailed study we have made of metadata sets in general, we have paid particular attention to "intrinsic" metadata subsets for the major genres of data that we have chosen to treat in the guidelines: email, desktop records (word processing, spreadsheet, etc.), databases, and webpages.

As far as the management of these four categories of records is concerned, we discovered that each demands separate consideration because each is implemented differently using existing technology:

Email: We are recommending that email be captured at central mail servers and regularly archived in escrow to the Archives. We considered studies that show that workers are reluctant to specifically tag their email, and we decided finally to accept this determination after consultation with our Health Department project partners, who were far more willing to archive and escrow everything, working with us to develop a filtering mechanism to define archival email, than they were to commit to individual employee training to achieve tagging.

Desktop Applications: Here we must realistically offer two sets of recommendations, for the COTS environment presently existing in state agencies and for a networked records management system which we will recommend that agencies adopt (we are recommending that agencies choose systems from the DoD 5015.2 standard). Here we judge from the reactions of our Advisory Panel partners that escrow archiving of COTS-produced records will be a particularly effective and well-received strategy, easing pressure on departmental file servers and simplifying recordkeeping tasks for the average worker.

Enterprise databases: Though we searched far and wide for good information on the treatment of enterprise-level multi-user databases, we found precious little to guide us. Because our Health Department partners already have an archiving plan in place for their mammoth Patient Information Management System for the short term, and because the mainframe-based early history of computing in Mississippi state government means that many other enterprise databases in state government are being similarly treated, we are adopting a modified version of noncustodial archiving, involving what we are referring to as "conditional schedules" that include specific and modifiable agreements for each database of archival value, where the Department of Archives and History stands as the archive of last resort as long as the agency is prepared to offer public access to historical data and to migrate database records.

Websites: These guidelines were the easiest of all to develop, since such a good and organizationally-informed job has already been done by the NHPRC-sponsored Syracuse study

that we are simply adapting this study to local conditions, making use of the existing functions of the Mississippi Library Commission, which is charged with the location and cataloging of all state publications. In addition, the ITS effort to develop a single portal site may simplify the task considerably if we can succeed in persuading departmental webmasters to adopt a Dublin Core markup template for all their pages.

Draft guidelines were posted at the end of the grant period, and we are presently in the process of evaluating reactions to them. We have requested comments from our agency partners, the Electronic Records Advisory Panel, our consultant Luciana Duranti, and the world in general, and have received generally positive responses. It is clear from these responses, however, that a set of implementation suggestions, much like the NARA "quick-start" set, is much needed. Posting to the Web has led to wide comment: we have received requests for detailed information about our survey and guidelines from as far afield as Kenya, and our guidelines have shown up in a student paper written for the USAF Airman Leadership School. As a result of all this response, we are in the process of revision in preparation for convening our Panel once more.

Findings and recommendations for continuation of the program

Poor recordkeeping in paper leads to poor recordkeeping in electronic systems. *Everything* flows from this, and attempting to end-run a lack of commitment to recordkeeping by creating Big Brother systems is not a solution. More likely it will mean no system at all, since such systems will be actively resisted or passively ignored by employees. Hence existing paper records management and archival practices need considerable prophylaxis to support good recordkeeping habits for electronic records. Now that the electronic records program is established as a section in the Archives and Library Division of the Department of Archives and History, additional steps flowing from work already completed should be undertaken; specific changes should be made to adjust records and archival operations; electronic records staff should work actively with other infrastructure agencies to improve recordkeeping practice; and specific legislation should be pursued to strengthen the program.

Additional work to be done to complete ongoing projects

- Reconvene the Electronic Records Advisory Panel to discuss guidelines, scheduling priorities, and demonstration projects.
- Solicit additional official public comment on the guidelines prefatory to adoption as a rule in the summer of 2000.
- Review project results with external consultants.
- Develop priorities for completing the scheduling of electronic records throughout the rest of the Department of Health.
- Establish a secure email transmission channel from the Department of Health.
- Complete the scheduling of PIMS, develop a model conditional schedule, and establish a reliable method for tracking developments of the PIMS archive system.
- Work with the Office of the Secretary of State to establish key escrow security methods for guaranteeing electronic records authenticity in transmission.
- Implement a networked COTS-based records-management system in our own Administration Division. Clone this solution throughout the Department.
- Convert paper control-folder data from the Records Management Division and Paper Records Section to electronic metadata form for linking with record-level metadata, deploying the relevant parts of the metadata superset already developed.
- Participate in a cooperative state government documents Internet portal development project with ITS and the Library Commission.
- Establish a "dead pages" website for archived web pages.
- Specify and purchase data warehouse software.
- Address the problems that may arise with electronic records that will be present in private records collections from businesses, individuals, and nonprofits.
- Deliver reports on progress at professional meetings (in 1999, project staff presented at NAGARA and SAA; project staff are making further presentations during this year at meetings of the Southern Archivists Conference and the SAA).

Changes to be made within Archives and History

Early on it became obvious that efforts should be made to *unite the records management and archival functions* by institutionalizing cooperative work by Records Management Division records analysts and Archives and Library Division archivists in the

process of inventorying, appraising, and scheduling all records. It seems obvious that issues of power and accountability are so crucial in archival support of adequate recordkeeping that the ideal records analyst should not merely think in terms of how to get rid of obtrusive records and chop the modern record down until it resembles ancient records. Instead, records analysts should expect to cope with both electronic and paper records throughout their life cycle, and should accordingly have a solid background and credentials in the social-science study of organizations and how they work (political science), of work patterns (industrial psychology), and of the design and function of filing systems of all kinds, electronic as well as paper (information science). A first step has already been made toward uniting these functions through the adoption of a team approach to inventory, appraisal, and scheduling, which has already begun to be tested in the field with all the Department's current records scheduling projects with agencies.

All existing general schedules should be reviewed in the light of social history and accountability concerns. We need to consider that as archivists we cannot be neutral participants in the keeping of the archival record: merely by keeping it, we alter its value, and since we as an agency already have broad statutory latitude in deciding what records are historically significant, we should be aware of the ways in which we bias the record by our scheduling and retention choices. Since the electronic record is potentially retainable and manageable without significant concern for physical space, we should consider keeping much more of it.

As we move to develop the technological infrastructure to support the secure retention of electronic records, *the Department should consider a serious media-conversion program* for preservation purposes.

Cooperation with other infrastructure and regulatory agencies

Our survey made it clear that agencies in general do not wish to be held responsible for the long-term preservation and migration of major electronic records series, unless those series represent a source of power or income such that the task becomes part of the agency mandate in some way, such as falling under the heading of management of vital records. Since it seems clear that such records will be in the minority, and MDAH will therefore in fact be required to take custody of most electronic records or see them deleted, to avoid an ultimately unmanageable situation MDAH must use the existing information technology and policy regulation infrastructure of Mississippi state government to promote better recordkeeping in general and a more manageable electronic end product.

First, as has been the case in the past, MDAH can work with the Department of Information Technology Services to mandate that certain standards include archival considerations. This should include strict requirements for open systems standards and metadata-enablement for all new systems, including imaging/workflow systems, collaboration environments, and databases. Use of the DoD 5015.2 standard (or its successor) for document-management systems should also be mandated by MDAH and ITS, while ITS's support of a prospective portal for state government services can promote and enforce web publication markup and database metadata standards. We might also work with ITS to establish statewide standards for IT policies and procedures, including such things as PC retirement and transfer practices and the necessity for making record retention periods coincide with routine IT purge practices.

In order to reinforce good electronic recordkeeping practices, MDAH can work with the State Personnel Board (SPB), which provides a range of training programs especially for supervisors and other state employees, including the Certified Public Manager course sequence, to include electronic recordkeeping and recordkeeping standards in general in their

educational programs. Formerly MDAH presented a records management course through SPB, and we should act to develop a range of such courses to cover more than just records management. In fact we have already taken action to develop a general overview of records management, recordkeeping systems, and electronic records standards to be offered in the fall of 2000 by archival and records management staff, we have discussed including a unit on recordkeeping and records management in the CPM course sequence, and we have plans in place to meet with SPB trainers to discuss the integration of recordkeeping principles throughout their training programs by building on an existing filing course and by working with SPB training staff to develop classroom materials. One specific example of this, that we feel is crucial, is that training in the formulation of employee evaluation instruments include the explicit description of any recordkeeping responsibilities employees may have as part of their performance evaluation.

Finally, MDAH can work with agencies and entities like the Legislative PEER Committee, State Auditor, and Secretary of State to encourage agencies to do better recordkeeping by encouraging these agencies to include the consideration of recordkeeping practices in their audits and policy reviews. We should also continue work with the Office of the Secretary of State to complete a secure statutory digital signature program to support the preservation of electronic records' authenticity in the provision of access.

Suggested legislation

1) The job classification of Records Officer should be established under the State Personnel Board. Incumbents of this position should be certified through both existing national certification programs and a training program focused on specifics of Mississippi state government and local records management requirements, to be created by the Department of Archives and History.
2) State agencies above a certain level of funding should be required to establish the position of Records Officer within their executive structure and to grant that position the authority to establish and regulate recordkeeping practices throughout the agency, working with the Department of Archives and History to establish, monitor, revise, and comply with records schedules. Large agencies should have an office that performs this task.
3) The Department of Archives and History should no longer be precluded from specifying explicit recordkeeping standards rules; language to that effect should be stricken from the present Archives and Records Management law.
4) Training in approved recordkeeping standards, through a program developed by the State Personnel Board and MDAH, should be made obligatory for all managers in state government.
5) Scheduling of the records of all agencies, boards, commissions, and other entities of Mississippi state government should be required. Legislation should be introduced to provide special funding to complete schedule coverage for all agencies within a finite period of time, followed by adequate funding to work with agency records officers on a regular basis to review and maintain the existing schedule regime.
6) The open records law should be revised to permit the Department of Archives and History to be designated by other agencies as sole access-provider to records still in administrative use but transferred in an authentic copy to the Archives via a schedule-regulated escrow process.

References

Arthur Young and MGT of America. *State of Mississippi Commission of Budget and Accounting Management Review and Implementation Program, Final Report Volume I* (State of Mississippi Commission of Budget and Accounting, 1980).

Bantin, Philip C. "Developing a Strategy for Managing Electronic Records--The Findings of the Indiana University Electronic Records Project," *American Archivist* 61(2), 1998, 348
----------"The Indiana University Electronic Records Project Revisited," *American Archivist* 62(1), 1999, 153-63.
Barry, Richard E. "The Changing Workplace and the Nature of the Record," unpublished paper downloaded from http://www.rbarry.com/ACA-PV16?ACA-PV16.html 4/6/99
Bearman, David. "Diplomatics, Weberian Bureaucracy, and the Management of Electronic Records in Europe and America," *American Archivist* 55 (1992), 168-180.
Beetham, David. *Bureaucracy: Second Edition.* Minneapolis: University of Minnesota Press, 1996.
Bourdieu, Pierre. *Outline of a Theory of Practice*, Cambridge Studies in Social and Cultural Anthropology 16 (Cambridge: Cambridge University Press, 1977).
Brookings Institution. *Report on a Survey of the Organization and Administration of State and County Government in Mississippi* (Jackson: Research Commission of the State of Mississippi, 1932).
Buck, A.E. *The Reorganization of State Governments in the United States* (New York: Columbia University Press, 1938).
Burchell, Graham, Colin Gordon, and Peter Miller (eds.). *The Foucault Effect: Studies in Governmentality* (Chicago: University of Chicago Press, 1991).
Capers, Charlotte. *Biennial Report of the Mississippi Department of Archives and History, 1955-57.*
----------*Biennial Report of the Mississippi Department of Archives and History, 1959-61.*
----------*Biennial Report of the Mississippi Department of Archives and History, 1963-65.*
----------"Records Management for Mississippi," *Journal of Mississippi History* XXV (July 1963), 202-7.
Dandeker, Christopher. *Surveillance, Power, and Modernity: Bureaucracy and Discipline from 1700 to the Present Day* (New York: St. Martin's Press, 1990).
Derrida, Jacques. *Archive Fever ,* trans. Eric Prenowitz (Chicago: University of Chicago Press, 1996).
Duranti, Luciana. "Archives as a Place," *Archives and Manuscripts* 24(2), 242-55.
----------"Diplomatics: New Uses for an Old Science," Parts I-V, *Archivaria* 28 (Summer 1989), 7-27; 29 (Winter 1989-90), 4-17; 30 (Summer 1990), 4-20; 31 (Winter 1990-91), 10-25; 32 (Summer 1991), 6-24.
----------"Reliability and Authenticity: The Concepts and Their Implications," *Archivaria* 39 (Winter 1994-95), 5-10.
Eastwood, Terry. "Should Creating Agencies Keep Electronic Records Indefinitely?" *Archives and Manuscripts* 24(2): 256-67.
Executive Branch Reorganization Study Commission. *Reorganization of the Executive Branch of Mississippi's State Government* [Draft], July 26, 1988.
Foucault, Michel. *Discipline and Punish: The Birth of the Prison,* trans. Alan Sheridan (New York: Vintage, 1995).
----------*The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage, 1994).

Hammitt, Harry. "The Privileged Few," *Government Technology*, December 1998: 26.

Hedstrom, Margaret. *Management and Preservation of Nevada's Electronic Public Records* (Carson City: Nevada State Library and Archives, 1990).

Henderson, Thomas W., and Ronald E. Tomlin, compilers. *Guide to Official Records in the Mississippi Department of Archives and History* (Jackson: Mississippi Department of Archives and History, 1975).

Henry, Linda. "Schellenberg in Cyberspace," *American Archivist* 61 (1998): 309-327

Highsaw, Robert B., and Carl D. Mullican, Jr. *The Growth of State Administration in Mississippi*. State Administration Series No. 10 (University: University of Mississippi Bureau of Public Administration, 1950)

Hilliard, Elbert R. *Annual Report of the Mississippi Department of Archives and History* (Jackson, 1976).

----------*Annual Report of the Mississippi Department of Archives and History* (Jackson, 1983).

Holmes, H.T. (editor). *The Management and Preservation of Mississippi's Historical Records: Problems and Potential*, 2 vols. (Jackson: MDAH, 1982).

Jenkinson, Hilary. *A Manual of Archive Administration*, reprint, 2nd. edition (London: Percy Lund, Humphries & Co., 1966).

Joint Committee on Salaries and Expenses in State Government. *Report* (Jackson, 1965).

Kammen, Michael. *A Machine That Would Go of Itself: The Constitution in American Culture* (New York: Knopf, 1986).

Kynerd, Thomas E. *Administrative Reorganization of Mississippi Government: A Study in Politics* (Jackson: University Press of Mississippi, 1978).

Legislative Audit Committee*, A Performance Evaluation of the Mississippi Department of Archives and History*, Report #38, October 15, 1975.

Lessig, Lawrence. *Code and Other Laws of Cyberspace* (New York: Basic Books, 1999).

----------"The Constitution of Code: Limitations on Choice-Based Critiques of Cyberspace Regulation," *Journal of Communications Law and Policy*, Summer 1997, 181-191.

----------"Reading the Constitution in Cyberspace," *Emory Law Journal* 45(3): 869-910.

Lutzker, Michael A. "Max Weber and the Analysis of Modern Bureaucratic Organization: Notes Toward a Theory of Appraisal," *American Archivist* 45 (1982), 119-130.

McCain, William D. *Biennial Report of the Mississippi Department of Archives and History, July 1, 1937-June 30, 1939* (Jackson, 1939).

----------*Biennial Report of the Mississippi Department of Archives and History, 1947-49*.

----------*Biennial Report of the Mississippi Department of Archives and History, 1949-51*.

----------(and Charlotte Capers), *Biennial Report of the Mississippi Department of Archives and History, 1951-53*.

----------"History and Program of the Mississippi State Department of Archives and History." *American Archivist* 13 (1950): 27-34.

McLemore, R.A. *Annual Report of the Mississippi Department of Archives and History*, 1969-70 (1970), 1970-71 (1971), 1971-72 (1972), 1972-73 (1973), Jackson, MS.

Mississippi Automated Resource Information System. *Mississippi Directory of Digital Geographic Data* (Jackson: MARIS, January 1995).

Mississippi Commission on Efficiency and Economy in State Government. *Report to the Governor* (Jackson, 1971).

Mississippi Department of Archives and History. *Records Management Handbook #1* (Jackson: MDAH, 1982).

National Historical Publications and Records Commission, *Research Issues in Electronic Records* (St. Paul: Minnesota Historical Society, 1991).

Pickering, Andrew. *The Mangle of Practice: Time, Agency, and Science* (Chicago: University of Chicago Press, 1995).

Porter, Theodore M. *The Rise of Statistical Thinking, 1820-1900* (Princeton: Princeton University Press, 1986).

Posner, Ernst. *American State Archives* (Chicago, 1964).

Riggs, Robert E. *The Movement for Administrative Reorganization in Arizona* (Tucson: University of Arizona Press, 1964).

Rowland, Dunbar. *First Annual Report of the Director of Archives and History* (Jackson, 1902).

----------*Second Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1903).

----------*Third Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1905).

----------*Fourth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1906).

----------*Fifth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1907).

----------*Sixth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1908).

----------*Ninth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1911*).

----------*Eleventh Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1913*).

----------*Twelfth Annual Report of the Director of the Department of Archives and History of the State of Mississippi* (Jackson, 1914).

----------*Biennial Report of the Mississippi Department of Archives and History* (Jackson, 1936).

----------*History of Mississippi: The Heart of the South*, 4 vols. (Chicago and Jackson: S.J. Clark Publishing Company, 1925).

----------*Mississippi*, 4 vols. (Atlanta: Southern Historical Publishing Association, 1907).

Schellenberg, Theodore. *Modern Archives: Principles and Techniques* (Chicago: University of Chicago Press, 1956).

Silberman, Bernard S. *Cages of Reason: The Rise of the Rational State in France, Japan, the United States, and Great Britain* (Chicago: University of Chicago Press, 1993).

Turkle, Sherry. *The Second Self: Computers and the Human Spirit* (New York: Simon and Schuster, 1984).

----------*Life on the Screen: Identity in the Age of the Internet* (New York: Touchstone Books, 1997).

Vansina, Jan. *Oral Tradition As History* (Madison: University of Wisconsin Press, 1985).

Weber, Max. *Economy and Society*, vol 2, ed. Guenther Roth and Claus Wittich (Berkeley: University of California Press, 1978).

Willbern, York. "Administration in State Givernments," in *The Forty-Eight States: Their Tasks as Policy-Makers and Administrators* (Columbia University: The American Assembly, 1955).

Yakel, Elizabeth. "The Way Things Work: Procedures, Processes, and Institutional Records," *American Archivist* 59 (1966), 454-464.