1996

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Building User-Oriented Web Sites for Archives

R. Philip Reynolds

For years the banking industry did not consider electronic services for customers as "real" business. Then in 1994, a study entitled "New Paradigms in Retail Banking" by the Bank Administration Institute (BAI) and First Manhattan Consulting Group revealed that more than half of all retail banking transactions occurred by way of an electronic medium. People were no longer going to their branch offices, but conducted business with their phones, PCs, and ATM cards. Suddenly banking executives stopped asking "Why should we offer electronic services?" and started asking "Why aren't we offering electronic services?"1 This same revolution in thought is inevitable in almost every field of service including archives. Unfortunately, changing the way an institution thinks about something is not the same as changing the way it does something.

In archives, adding effective electronic services by way of the Internet is often expensive, confusing, and difficult. However, by learning more about the needs and expectations of those being served, archivists can more effectively develop a coherent approach to providing services that users want and expect through the Internet.

In recent years, the idea of customer driven service has infiltrated libraries, archives, and government agencies. This is not always an easy idea to implement because most archives have many different customers or users. First and foremost is the institution for which the archives was created. Archivists also have responsibilities toward scholars, genealogists, and any other researchers that are allowed to use the archives. When integrating electronic service into the operations of the archives both the common and unique needs and expectations of all users should be considered.

Unfortunately, when archivists look at the overwhelming advances in computer and telecommunications technology and compare them to the resources of their own institutions, they often become discouraged. It is not that most do not want to provide Internet services as much as it is that their institutional resources of time, staffing, training, equipment, and money seem to prevent them from doing so. The gap between user expectations and institutional resources seems insurmountable.

To begin bridging this gap between user expectations and archives resources, it is important to know what users want. Conducting two informal surveys of a genealogical and an archival Internet listserv helped to identify the expectations of some user groups. With the information gathered from the
surveys, it is possible to suggest ways in which institutions without unlimited resources may develop an Internet presence that effectively meets the seemingly limitless expectations of their users. Since genealogists are one of archives' most prolific user groups, their opinions should provide some valuable information regarding user needs. It is true, however, that much of the information gathered can be applied to all user groups.

The following survey was used to determine what genealogical customers expected of archives by way of electronic service. Subscribers to the Roots-L news group received the informal survey in February 1997. The Roots-L group has approximately seven thousand members and represents people with an interest in family history and at least a minimal understanding of computer technology.\(^2\) The survey consisted of the following questions:

1. What types of services do you expect from state archives (or other archives) through the World Wide Web?
2. What types of services have you used from state archives over the web?
3. What did you like about the service?
4. What did you not like about the service?

Eighteen of the twenty responses received were usable. Although the focus was on state archives, the information gathered is useful to almost all archives.

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\(^2\)The Roots-L home page can be found at <http://rootsweb.com/roots-l> (March 1998).
Responses to the first question were surprisingly varied. Rather than assuming that all records should be on-line, most respondents were far more reasonable in their expectations. The number one service that genealogists wanted from state archives was not on-line documents nor reference services but indexes of records (eleven responses). Next came copies of records on-line (eight) and then holdings lists (seven). Most respondents listed more than one expectation, including complete and clear explanation of services (five), links to related sites, maps of archives locations, maps of cities and counties in the state, and a history of elected officials with their genealogies. Technical suggestions included pages that load quickly (no big files of pictures of archives buildings or documents), on-line payment for services, and web sites that are easy to navigate.

The second question about genealogists' use of electronic services did not have as many responses. The two most common comments were that they used e-mail services or used no services at all. The other requests were for on-line indexes, holdings lists, and links to the GenWeb project.\(^3\)

Genealogists listed several things they liked about the sites they visited. The most frequently praised quality was that the page "loaded quickly." Other technical aspects respondents liked were a "good search engine" and ease of use. Many appreciated the convenience of using the web and the time and money saved by not having to travel to the archives. They also appreciated the fact that they did not have to

\(^3\)The GenWeb home page is at <http://www.usgenweb.com/> (March 1998).
depend on an archives staff member or volunteer to do research for them. The information they most liked consisted of hours and location, indexes, complete lists of genealogical records including links to other sources, or, as one researcher put it, "one stop shopping," and information about services and fees.

The items most disliked about sites included no e-mail service, not enough information, not enough information relevant to genealogy, no indexes, no maps, and no records on-line. The main technical concern was that the site was slow or inaccessible. Most of the responses from the Roots-L news group were reasonable and corresponded nicely with the responses from the companion survey posted to archivists on the Archives and Archivists list. The following questions were posted to the Archives and Archivists list:

1. Do you currently or are you planning to offer reference service through the Internet?
2. If you are currently on the web, what is your archives URL?
3. What do you feel is the most important information your institution provides on your web site?
4. What were (or are) the staff's concerns about providing reference services for genealogists through the Internet, e-mail, etc.?
5. How many e-mail requests do you get?
6. Have requests by other forms of correspondence increased, decreased, or remained the same?

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7. Were your concerns realized when the service was offered?
8. How was the content for your site chosen?
9. What information does your institution feel it is obligated to provide electronically?
10. What is your institution's ultimate goal concerning electronic reference services?

Two pieces of information that this survey attempted to elicit were archivists' views about what electronic reference services should be offered by their institutions and some of the concerns about attempting to offer these services. In many respects, the ideas expressed by the archivists were not far from those expressed by the genealogists. However, the concerns expressed by the archivists remained consistent. These concerns are probably the primary barrier preventing archives from offering electronic services.

All nine respondents to the archivists survey either had a web site or were planning to establish one. The information that archivists felt was the most important to provide on web sites fell into two categories: information about their collections and information about their institutions. Important institutional information included the institution's existence, that visitors were welcome, how to contact the archives, and information about archival practices. By far the most important item listed by archivists was the holdings of the archives. This item garnered six responses while others at most received two responses. Other items viewed as important were information about records used by groups other than genealogists (teachers, students, scholars), information about area genealogy, and detailed information
about specific record groups of particular interest to genealogists.

Most institutions selected content that reflected their holdings, services, and organization. Many created on-line versions of print brochures already in use. Some chose content by committee while others looked for ideas at other sites. Only one institution reported utilizing user input when creating their site. In response to repeated requests from users, the Tennessee State Library and Archives put maps and directions to their archives on the web site.5

When asked about staff concerns, the most prevalent response involved the potential of an overwhelming increase in requests. Other concerns included inappropriate or frivolous requests with no relation to the archives’s collections, unreasonable service expectations, collecting research fees, and the most basic requirement of getting the web site started. Almost all of these concerns were realized. Most of the institutions with collections of interest for genealogists had a tremendous increase in requests. Debbie Pendleton, assistant director of public services at the Alabama State Archives, reported an increase from 85 on-line requests in the third quarter of 1996 to 202 requests in the fourth quarter of 1996. This was in addition to their other correspondence.6 Those without genealogical collections saw little or no

5Charles A. Sherrill, response to author’s archivist survey, e-mail message, Archives and Archivists list (12 February 1997). The location for the site with the maps is <http://www.state.tn.us/sos/statelib/welcome.htm>.

6Debbie Pendleton, response to author’s archivist survey, e-mail message, Archives and Archivists list (12 February 1997).
increase in use. The only concern that did not come to fruition was the fear of losing fees. Pendleton reported that so far their department successfully collected their out of state fees.7

The survey question What information does your institution feel it is obligated to provide electronically? was not clear and was omitted by many respondents. Those that did answer felt that they were obligated to provide information about location, services, and holdings. The Missouri State Archives, for example, is required by law to provide in electronic format any record requested in that format. They do not have to have the records available on the web, but they are required to provide the document in the requested format within three working days or respond with an explanation of why it cannot be provided in that format.8 Only two respondents felt that they were obligated to provide reference service.

The next question addressed the goals concerning on-line services. The most widely accepted goal was to provide information about the holdings of the archives. Others wanted to provide some type of on-line access to collections, to reduce costs, to prepare patrons for visits, to increase use, to decrease use, and to increase use by people not working on family history.

The results of these surveys are both informative and helpful. There is one important point on which both

7Pendleton, survey response.

8Missouri State Archives, response to author’s archivist survey, e-mail message, Archives and Archivists list (12 February 1997).
genealogists and archivists agree. Those working on family history want greater access and better service. Likewise, archivists for the most part want to provide greater access and better service. This fundamental agreement provides the groundwork on which archivists can build electronic services that will enable them to achieve mutually shared goals. It is unlikely that archivists will ever achieve the unrealistic goal of digitizing entire collections for on-line perusal. It is also just as unrealistic to expect that archives will retain badly needed public support and funding without some type of electronic service. Using some of these common expectations to build a bridge between archives' limited resources and users' needs is a way to start building user-oriented web sites.

**Building a Web Site**

Before a web site can be created, computers and Internet access must be available. With the expansion of the Internet into most government, business, and educational institutions, it is tempting to consider it a given that all archives are, or soon will be, wired. However, to many this is still a distant dream instead of reality. In the upcoming century, it will be vital for the survival of any archives that it acquires and maintains computer equipment and network access. Without these the world is denied an important channel of access to archival collections, and the archives is denied an important world forum and informational resource.

Many archives have their hardware selected for them by their home institution, and many archivists are not involved in these decisions. So discussing hardware concerns in this article seems unproductive. However, if archivists are
empowered to make purchasing decisions, they may want to consider the following options. One alternative is to lease instead of buy the hardware. By leasing, the expense can be considered as a recurring cost, and the archivist will not have to go before a governing body to ask for more money every three years for equipment upgrades. Another alternative is to acquire equipment through donations from large corporations that are upgrading their equipment and are looking for a tax credit. In any case, computers are as vital as the typewriter and telephone to an archives's survival.

With that in mind, it is time to start building the web site. With terms like *virtual library* and *information super highway* on the cover of every magazine, on the lips of every politician, and splashed across every television screen, it is easy to become discouraged. Many archives do not have the needed resources to provide services like the American Memory Project. However, this does not mean that a meaningful contribution cannot be made. A web site does not have to be expensive or cutting edge to be useful. The ultimate value of an information container is the quality of the content and not the pizzazz of the container. Effective and significant contributions to the World Wide Web can be made on an incremental basis. As an archives's resources and expertise increases, so can its web presence. Following are some suggestions on the incremental development of effective electronic services through the World Wide Web.

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User-Based Content

When planning to offer services through the Internet, archivists need to consider many things. What computer resources are available in staff expertise, software, and hardware? Who will have control over content? Will the archives be able to determine content, or will that be controlled by a public relations office or by the company that is contracted to construct the web site? What people need to know about the archives? While all of these questions and many others are important, one question that is often overlooked is What do people want us to tell them about the archives? Most good archivists have an idea of what their customers want. However, it is no longer enough to base service on ideas of what customers want; it is also important to ask them what they want.

Archives have many different but identifiable user groups. These include their sponsoring body (such as state government), records managers, scholars, historians, preservation customers, other archives, and genealogists. To create an effective web site that offers needed services, each of these groups should be consulted. In an article in the American Archivist, Lawrence Dowler wrote that “Archivists need a better understanding of who uses archives and for what purposes, and of which theories and techniques are most suited to facilitating use and satisfying most users over time.”10 User needs should be assessed and considered in all

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aspects of archival work. This information can be most useful in designing services such as a web site. The Internet provides a unique opportunity for archives to improve services to their customers, to provide some preliminary mediation to potential visitors, and to attract new users and user groups.11

The Home Page

The first step in establishing a web site (after the hardware is set up and running) is to create a home page. Using the survey for guidance, it is clear that many users want to know the archives location, how to contact the archives, and what services are offered. This basic information is easily gathered and easily published on a web page. By starting with this simple information, archivists can gain experience with HyperText Markup Language (HTML) format and the construction of web pages.12 Once the content is chosen,

11 Pre-mediation is mediation that occurs before a user visits the archives. This includes instructional material in print or electronic formats that instructs users about the use and content of a certain archives and its records. The Internet has many exciting possibilities in this area. For an example of how the Alabama State Archives attempts to attract new user groups see <http://www.asc.edu/archives/teacher/geninfo.html>.

12 HTML is the computer language used to create a hypertext document or web page. An excellent web site for learning about HTML can be found at <http://www.htmlgoodies.com>. There are several books available to assist in creating web pages, including the most recent editions of Ed Tittel and Steve James, HTML for Dummies (Foster City, CA: IDG Books, 1995) and Laura Lemay, Teach Yourself Web Publishing with HTML in a Week, first ed. (Indianapolis, IN: Sams Publishing, 1995). SGML (Standard Generalized Markup Language) is another markup language with greater capabilities and complexity. Many archives are starting to use this language to put their finding aids on-line, and the federal government requires it to be used in some of its electronic documents. However, SGML is not yet widely used on the web, and most browsers cannot currently read it to create both HTML and SGML documents. Decisions about what standards
then thought can be given to the effective presentation of that content.

An attractive and efficient layout can have a significant effect on the user. In this early stage, it is a good idea to experiment with different layouts. Web site creators can look to books about building web pages and to the Internet for examples. Once a style or format is chosen, it should be used consistently throughout the web site. While the layout and graphics on a site can have a positive effect on a user, they can have a very negative effect as well. In the Roots-L survey, participants responded negatively to web sites that required them to wait a long time for loading. It is frustrating to wait several minutes for a page to load and then only be presented with a picture of the archives and the hours it is open. If an archives is going to create a fancy information package that delays prompt access, there needs to be something worth the wait.

Providing a site that loads quickly does not preclude the use of images and graphics. A reasonable amount and an appropriate choice in graphics can enhance a site. Some information is best displayed in the form of a graphic. Maps showing the archives location are themselves important information. However, they can still be provided in a way that will not unduly slow performance. Large images such as maps can be offered as thumbnails—files that can be downloaded or that can link to other pages.

and formats to use will be based on the goals, user needs, and resources of each individual archives.
Print Materials and Links

Information available on the home page can come from documents already created by the institution. Versions of pamphlets, brochures, leaflets, and other in-house publications can easily be put on-line. Most current word processors can convert documents into HTML format. While it is useful to put text documents on the web, the value of these documents can be greatly enhanced by adding links to other web pages with relevant information. The ability to link relevant information in this manner is one of the most important attributes of the World Wide Web.

Holdings

Probably the most universally requested and usable pieces of information for a web site are the holdings of the archives. The ability to search remotely the contents of an archives is invaluable to all researchers and not just genealogists. Providing this information on-line can increase the use and prestige of any archives. It can also have an effect on the quality of requests received by the archives. The number of researchers requesting records not held by that particular institution could potentially drop. To curtail requests for information not held by the archives, on-line holdings lists can be linked to other records sources. For instance, if a state archives keeps getting requests for obituary notices, a link from its site can be made to another institution that has newspapers. An institution such as the Kentucky Department of Libraries and Archives (KDLA), which contains only government records, could link to the University of Kentucky’s (UK) library site. This would be helpful because
the UK library has the most complete collection of Kentucky newspapers available. In this example, not only is some preliminary mediation done but also the user is guided to the desired information.

There is also an opportunity to guide users to other sources for documents in the archives's collections. Experience in answering letters at the Illinois Regional Archives Depository (IRAD) and KDLA indicates that a majority of the genealogical requests could be answered by other institutions. Census information can be acquired from federal depositories, inter-library loan, and local Family History Centers. Microfilm copies of almost all the records that are listed on the genealogical request forms for KDLA and many other institutions are available through Family History Centers. Users can be offered more opportunities for research and may feel their needs will be better served by choosing one of these alternatives. Eventually, requests may decrease when researchers are given other options. This will free archivists to process new collections, work on preservation, improve access with finding aids and indexes, and provide access to records that are not available through other sources.

13 For information about regional National Archives and Records Administration depositories see <http://www.nara.gov/nara/regional/nsrmenu.html>. Family History Centers are sponsored by the Church of Jesus Christ of Latter-day Saints. Most medium to large cities in the United States and many other cities around the world have a Family History Center. More information can be found at <http://www.lds.org/Family_History/How_Do_I_Begin.html>.
Indexes

One of the more common suggestions on the survey was the request to provide indexes. Placing indexes on-line can save the researcher and the archives time and money. Researchers who use indexes can request a specific document by a standard locating device (volume and page number, certificate number, etc.). This reduces the work required by the archivist to deliver the document. The step of checking the index is eliminated. Also requests for documents not listed in the index may be eliminated. Record indexes can be created by the archivists, in cooperation with other institutions and genealogical societies, or by individuals not associated with the archives. With the World Wide Web, these indexes can be linked to the listing of the record in the on-line holdings list. Many genealogists have already created record indexes, and many of these can be found in the GenWeb archives. These indexes can either be searchable databases or simply text documents that can be searched using the find command on the user's web browser. Since indexes are expensive and time consuming to create, archivists may want to consider taking advantage of these web-mounted indexes in the same way many have made use of the print indexes produced by genealogists in the past.14

14For example, Illinois public domain land sales can be found at <http://www.sos.state.il.us/depts/archives/database.html>. Kentucky vital statistics can be found at <http://www.ukcc.uky.edu/~vitalrec/>. The GenWeb archives is available at <http://www.rootsweb.com/~usgenweb/>. This page lists the indexes and transcriptions available in ASCII text through the GenWeb project. However, archivists may be concerned with the liberal use of the words “archives” and “archivist” on the GenWeb site.
Reference Requests

Another legitimate concern archivists have in providing electronic reference service for genealogists is the fear of being inundated with requests, both with legitimate requests and with inappropriate or frivolous requests. Literature from the library community regarding e-mail has limited applicability to archives and can even be deceiving. While studies of e-mail service at libraries consistently report a limited or nonexistent increase in requests, all but one of the archives responding to the survey reported significant or even overwhelming increases in reference requests. This important contrast is due partly to the differing natures of archival and library collections and the differences between archival and library patrons. Few librarians writing about library correspondence refer to their users as "a persistent legion known collectively as family historians or genealogists."15 Yet many archivists receive this description with a knowing grin. Understandably, many who already offer correspondence service are reluctant to add e-mail requests to that service.

Document Delivery

There may be an intermediary step between providing finding aids and indexes on-line and providing full blown reference service. For some it could be a final step in their offering of on-line services. This step is document delivery. For the purposes of this paper, there is a subtle but significant distinction between document delivery and reference service.

In an archives, document delivery occurs when a user requests a specific document by page number or certificate number or some other locating device and then the archivist copies the requested page or document and subsequently mails, e-mails, or faxes it to the user. Reference service is when a user requests information or a type of document, and the archivist must search for the specific document or information before delivering it to the patron.

Before accepting e-mail reference requests, archivists can test the waters with document delivery requests. For each printed index, database, or on-line index, a web page form can be created. These forms can have certain boxes to complete. For instance, a form for a Kentucky death certificate would have boxes for the user to enter the name of the person as it appears on the index, the certificate number, and the death date. Another part of the form could have sections for a mailing address and an e-mail address. The user can then submit the form electronically to whatever e-mail address the archives has chosen. The form can be programmed not to deliver the request unless all of the boxes or fields are completed. Separate forms could be created for each database, or a single form could be used for all of them. After the archives becomes accustomed to dealing with these requests, the service could be expanded to accept information from any index, either print or electronic, even if it was not created by the archives.

By providing this service for the records most used by genealogists, archivists can essentially provide documents to users in a way that will be greatly appreciated without having to put entire record series on-line. The library community has
recently been lauding the benefits using document delivery to get information to their users "just in time" instead of building huge on-site collections "just in case" their users might want a particular piece of information. This philosophy should be applied to virtual collections as well. Through document delivery, archives can use their resources to provide information "just in time" instead of devoting even greater resources to develop virtual on-line collections "just in case." Archives could also use this service to expand the use of other documents. What would happen if historians could search the indexes from the journals or letter books of the earliest state governors and then request pages from these records from their desktop? Students and scholars would probably use the archives more. This service could potentially widen support for the archives and increase the use of some of the important but underutilized records that all archives have.

Documents could be delivered through the U.S. Postal Service. However, after getting the document delivery service off the ground, archivists may want to consider offering to scan requested documents electronically and to send them to the user by e-mail. The document scanners could then be used to add images and text to web pages and any other archives publications.

Reference Service

After the institution has successfully adapted to answering e-mail document delivery requests, it should have the needed policies and procedures in place for reference requests. Forms like the ones used with the indexes could also be used for reference requests. These forms can be based on existing
correspondence request forms and policies.\textsuperscript{16} Most archives that accept e-mail requests print the requests and then handle them in the same manner as they do all other correspondence. Usually existing policies and procedures can be used with little or no adaptation. There is one caveat, however. Many of the archivists who responded to the survey reported that often when patrons made an e-mail request, they expected an immediate response. If the archives is going to treat e-mail requests like any other correspondence request, then the patron needs to be informed. Currently, the Missouri State Archives is preparing an automated form letter that will be sent immediately in reply to all e-mail requests. This letter informs users that their requests will be placed at the bottom of the stack of correspondence and that archivists will respond to the request in the order in which it was received. An explanation like this should also appear on the request form, but an e-mail response restating this point is also needed.

\textbf{On-line Documents}

Access to electronic versions of all archives documents remains a distant dream for many archivists and genealogists. Unfortunately, the only places that this dream may come true are either in a very small archives or on an episode of \textit{Star Trek}. Some in the library field are even beginning to question the value of attempting to build digital collections and digital

\textsuperscript{16}The Texas State Archives request form is at <http://link.tsl.state.tx.us/t/tsaref/jcemai.html>.
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libraries.\textsuperscript{17} However, this does not mean that there is no place for providing Internet access to on-line records.

There are two schools of thought when choosing documents for digitization. One states that archivists should provide on-line versions of the most frequently used documents and one that they should provide on-line versions of the most unique or rare documents. Immediate access to the most frequently used on-line documents would seem to be the option most responsive to user needs. At any time users can search and print documents right from their desktop. They do not have to drive anywhere, pay anything, or do any work to get what they want. Archivists can look forward to fewer visits to the reference room for research that can be done elsewhere. Archives could even charge users prior to allowing access to these records to cover the cost of providing the service. This would be similar to the way many archives currently charge for providing reference service.

While this seems to be a compelling goal, there are some significant arguments against it. Among them is the size of the record series involved. The staff time and computer hardware requirements for scanning, storing, then offering hundreds of thousands, even millions, of birth, death, and marriage certificates are considerable. Once the records are on-line, how will they be searched? What will the costs be to migrate the stored images or text continually to upgraded software, hardware, and operating systems? How many users will really have computer access? The most compelling reason against offering the service is why all of this time,

effort, and money should be put into providing these documents on-line when they are already widely available on microfilm through interlibrary loan and Family History Centers. Do ethical and legal requirements to provide access to these records include providing them to every on-line computer user in the world whether they want it or not? Should tax payer money be used to do this? Could the money be better spent by expanding conventional document delivery and research services?

The alternative of a more limited offering also has many strong points. Many other series are much smaller and therefore more easily put on the Internet. With this option archivists can choose truly unique and one of a kind series to put on-line. By doing this they can provide access to records that are not available elsewhere. Archives can also make a truly unique contribution to cyberspace by providing rare documents on the web. This in turn can help scholars who are interested in the documents to have access that they otherwise might not have and to introduce them to collections they may not have discovered otherwise. The original documents can be preserved while users access the electronic versions.

While this option has its appeal it also has some drawbacks. By providing access to rare and little-used documents, are archivists truly responding to users' needs? Should a service that is mainly for a smaller user group (historians) be provided at the expense of services that could go to other, larger user groups? Would the money spent on digitizing the collection be better spent on more traditional forms of distribution such as microfilm? Can the archives ever find the resources to make the effort anything more than
a collection of curiosities? Could the money be better spent by expanding document delivery and research services?

Finding answers to these and many other questions will be difficult. The answers for one archives will probably be different from those for another archives. It may be that some combination of both approaches would be appropriate. By using an incremental approach to the development of a web site, archivists can choose at any time to stop or postpone development if they have reached the limits of their resources. In any case many users already expect the entire archives to be on-line and are often angry or disgusted when told otherwise. These users need to be educated about the difficulties and expense in digitizing and then providing on-line access to archival collections. The archives web site is an excellent place to educate users. Archivists “must do far more than run the research room [or web site], a fact of which the researcher is seldom aware.”

Researchers need to be told that as with many aspects of archival work, these projects are neither easy nor free.

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PROVENANCE 1996