Internet Resources on Aging: Increasing Options and Human Factors

Joyce A. Post, MSLS
Internet Resources on Aging: Increasing Options and Human Factors

Joyce A. Post, MSLS

Growth of Internet Resources on Aging

The first version of “Internet and E-Mail Resources on Aging” (http://www.aoa.dhhs.gov/aoa/pages/postlst.html) was published in May 1994. At that time, the leading edge of Internet resources was listservs, also known as e-mail discussion groups. GERINET and ALZHEIMER had been created earlier that spring and the information professionals in aging had just created AGELIS-L. As one of these information professionals, I thought the number of these new types of resources in aging would probably grow, and I wanted to keep track of them. So I made my first list. It was two pages long and had a total of eight items on it. Six of these were discussion groups. From the beginning I purposely included only resources specifically about aging and its closely related topics.

In February 1995 the committee on Library Service to an Aging Population of the American Library Association sponsored a Mini White House Conference on Aging in Philadelphia. I prepared the next version of my list for this occasion. It still included mostly discussion groups focused on aging topics, which had been steadily increasing in number, but I added information about the aging forums on the different commercial services like America Online, CompuServe, etc., on the local freenets like the ones in Cleveland and Denver, and about the bulletin board services of such organizations as the American Association of Homes and Services for the Aging and the National Association of State Units on Aging. The list included 28 items and was eight pages long. The World Wide Web (WWW) was in its infancy and there were just two Web sites on this version of the list.

In May 1995 I issued the 3rd version. WWW sites were quickly becoming the leading edge of the Internet and my list was now 15 pages long. It included 65 items, and 27 of them were Web sites. It was also in May 1995 that the two other major currently maintained listings of Internet sites on aging made their first appearance. These two listings were from organizations who already had their own home pages, so they made their listings available from this access point only. This meant that only those who had access to the Internet could use them.

Bruce Craig’s “Directory of WEB and Gopher Aging Sites” (http://www.aoa.dhhs.gov/aoa/webres/craig.htm) began by concentrating on listing the home pages of the State Units on Aging and the Area Agencies on Aging of the “aging network,” of which Bruce at the U.S. Administration on Aging (AoA) was a part. Craig’s list has since expanded to include all types of aging resources on the Internet, and at this writing, it is the largest and most frequently updated of the three major listings of Internet resources.

The third major listing of Internet resources on aging is GeroWeb, produced by Darin Ellis and Jarrod Jasper at the Institute of Gerontology at Wayne State University (http://www.iog.wayne.edu/GeroWebd/GeroWeb.html). In the beginning it concentrated on listing the home pages of the various university programs in gerontology, but it, too, has since expanded to include all types of Internet resources on aging. At this time it is the only one of the three major listings that has its own search engine.

Between May and November of 1995, when I produced the next version of my list, the number of Web sites in aging exploded. The November list included 277 resources and was 44 pages long. Up until this time the various versions — I called them editions — were available in printed format only. I had always wanted to be sure that persons who didn’t have Internet access could still get this information, and there were always plenty of people who wanted the list as a printed document. However, I now needed to make it available electronically too, and needed to find some organization that could provide a host computer to act as a server on which to mount a home page for the list since my own organization did not have this capability at this time. Saadia Greenberg at AoA offered not only their host computer, but also to convert my document to HTML format and add internal links within the document as well. I was overwhelmed by this generosity, and that No-
November my list was available both in printed and electronic formats. This was also the first version of the list that had an index. There were so many listings now that I couldn’t keep track of them; I conjured that others would also have this problem, so I added an index. The resources on the list were still grouped as they had always been: by major sections that corresponded to the individual parts of the Internet—listservs/discussion groups, freenets, bulletin boards, commercial services, newsgroups, Web sites, etc.

As Web sites grew in sophistication and complexity, so were the parts of the Internet themselves changing, and the distinctions between them were becoming increasingly fuzzy. You could get to Web sites through the commercial services, discussion threads on the listservs were archived and accessed from home pages, bulletin board services were evolving into Web sites, and newsgroups in aging never really took off. So the May 1996 version of my list underwent a major change. Resources were now grouped into over 20 sections on specific aging topics that included aging research, Alzheimer’s disease, educational programs in gerontology, legal sites, the long-term care industry, nursing, geriatric psychology, sites for seniors, special populations, etc. All resources that described a local service or had a specific geographic focus were grouped into one large “State and Local Services, Agencies, and Resources” section that was further subdivided by U.S. states and the countries of the world. This brought together by state or country the home pages of the official state and local government organizations devoted to aging services, the state associations of homes and services for the aging, individual long-term care facilities, senior resource centers, meals on wheels programs, adult education programs, medical facilities with special geriatrics programs, local Alzheimer’s organizations, caregiver provider organizations, etc., plus all the freenets and bulletin board systems.

The May 1996 version included over 700 resources and was 82 pages long. Saadia Greenberg increased the usefulness of the electronic format of this version of the list by hotlinking each of the Web sites. This meant that the user could now select any Web site from the list and go directly from there into the home page of that site. The discussion groups, commercial services, freenets, etc. that had been grouped together in the previous versions of the list could still be found listed together in the index under the name of that part of the Internet. This was the last version of the list to be available as a printed document. It simply became too time consuming to maintain both the printed and electronic formats.

Time, in fact, had become a major factor for the compilers of the three major lists. Looking for new sites and reviewing the sites already on a list to assure that their URLs and descriptions were correct took enormous amounts of time. There was talk of combining all the resources on all three lists into one master list, but, as of this writing, this has not happened. There are now well over 1,000 resources on aging available using the Internet. Many of these are of a substantive nature and are the only place where their information can be found. Clearly, something will have to be done. Perhaps the listings will be abandoned and users will have to rely on the search engines that search all of Webspace. They are becoming more sophisticated, but at the same time, they are also becoming more difficult for the average user to use successfully.

The Larger Picture

We must not lose sight of where the Internet fits into the total picture of all the different information resources in aging. It is simply the latest option in an ever-increasing range of information formats and resources. It certainly is not the only one and it certainly won’t be the last one.

If we survey all these information formats and resources, several trends quickly become apparent:

- Their numbers are increasing;
- The time interval between the introduction of a new type of resource and the one that preceded it is shorter than the interval between the previous two;
- Each new resource is more complex to use than the one before it;
- The additional factors a person must contend with to use each new type of resource increases;
- Each new resource attracts more users who are less aware of how to successfully use it; and
- Users insist on using the newest resource regardless of whether or not it is the most appropriate one for what they are looking for.

These trends can be illustrated by tracing the content and the formats of the literature and information on aging through four major changes in the ways it is and has been accessed. These four ways are printed indexes, online databases, CD-ROMs and direct dial-up access, and the Internet. We only have space here to describe these major changes, but a similar look at both the smaller changes that have occurred within these major changes, and at numerical data sets would also illustrate these trends.

Printed Indexes

In the beginning there were printed indexes to the literature of aging, and a thorough search of this literature meant using each of three different indexes: “Current Literature on Aging,” “Psychological Abstracts,” and “Index Medicus.” The indexes were authoritative, manageable, relatively uncomplicated to use, and appeared in stable formats at regular intervals. The first index listed above has since been continued by “Abstracts in Social Gerontology”; the other two are still being issued.

Printed indexes have their drawbacks. You cannot easily look for two or more concepts at the same time, you retrieve only citations with or without abstracts, you must locate the journal in which your article appears if you want to read it in its entirety, you must hope the article has not been ripped out,
Online Databases

In the late 1960s and early 1970s most of the major printed indexes also became available as online databases. Their major virtue was that you could now search on more than one concept at the same time. To continue with the three major information resources in aging, the online database version of “Psychological Abstracts” is “PsycINFO.” The original online database version of “Index Medicus” is “MEDLINE.” The online database for aging, “AgeLine,” is not based on any previously printed index (Post, 1992, p. 11). It first became available in 1983.

The earliest online databases were available only through specialized vendors like DIALOG (now Knight-Ridder Information) and BRs (now Ovid). Only libraries, large corporate users, or serious researchers could afford their high costs or understand the many separate charges that contributed to the total online cost of using them. They were searched using command language (all the user saw on their screen was a blinking cursor) and an arcane syntax that included Boolean techniques and adjacency operators. Information professionals had to be trained to use them, but once trained they could retrieve very precise results. They could search, for example, for the concept of “managed care” and not also retrieve items about “the use of [m]ed food portions in the [c]are of sick pigs.” Over the years the producers of data bases expanded their coverage and many now provide the full text of an article online.

The National Library of Medicine, creator of “Index Medicus” and “MEDLINE,” now provides many specialized databases like “BIOETHICSLINE,” “CANCERLIT,” “AIDSLINE,” and “HealthSTAR,” all of which are accessed using the same techniques as “MEDLINE.” “HealthSTAR” is quite new and is the database to use when looking for information about the non-clinical aspects of providing health care, long term care, continuity of care, the many ways of measuring quality of care, and the provider and payment issues of managed care.

CD-ROMs and Direct Dial-up Access

Twelve to 15 years after the introduction of data bases, their developers started marketing them to end users who had no specific training in how to use them. They developed two different formats to reach these users. The CD-ROM format is a silver disc that looks exactly like an audio CD, but the technology is completely different. Among other things, CD-ROMs require their own special drives. They are very compact and transportable and entire databases will fit on just one or a few CD-ROMs. The complete “AgeLine” database fits on one CD-ROM that is available from SilverPlatter (http://www.silverplatter.com/catalog/agel.htm). “MEDLINE” is available on CD-ROMs produced by a number of different manufacturers. The CD-ROM version of “PsycINFO” is called “PsycLIT,” and it fits on two discs and is also available from SilverPlatter (http://www.silverplatter.com/catalog/psyc.htm). (The Silver Platter home page given here provides information about the product, not the data base itself.) Although the cost is decreasing, most data bases on CD-ROM are still quite expensive and are found mostly in libraries.

The second format, direct dial-up access, provides the end user with the option of logging directly into an online database. Its advantage is that anyone with a computer and a modem can do it. It can be either free or accompanied by a charge. Students, faculty, and other members of a university community, for example, usually have free dial-up access that is provided by their own libraries and on-campus computing facilities. Those who pay a charge for dial-up access are the subscribers to a variety of different providers. Three of the better known providers that professionals working in aging are likely to use are the commercial online services like America Online and CompuServe, and the National Library of Medicine (NLM). Dial-up access does, however, have its own technical requirements that the user must meet before he or she can gain access to the data base. The user must find a provider who both makes the data base he wants to search available, and who will allow the user access to the data base, and the user must have a modem, get a password, and match the settings of his or her own computer with those of the computer hosting the database.

Both “PsycINFO” and “AgeLine” are available on CompuServe. The user has two different options for accessing “PsycINFO” on CompuServe: Knowledge and Iquest. Each option is appropriate for a different type of use of the database and computes the online charges a different way. Go to http://www.apa.org/psycinfo/compsrv.html for further details about accessing “PsycINFO” on CompuServe. “AgeLine” is accessed only through the Knowledge Index option of CompuServe.

NLM provides direct dial-up access to “MEDLINE” and its other specialty databases in two different versions for two different audiences. “Grateful Med” is the version for the general user. The cost for the basic software, which you install on your own computer, and all upgrades is a one-time charge of $29.95, and the online charges are very low — an average search usually costs about $2.00 or $3.00. The online charges to search “AIDSLINE” have been completely eliminated. Numerous training programs are available, including one on video. “Physicians Online” is the version for physicians. It is sponsored by the drug companies who provide free passwords and eliminate all or most charges.

In these efforts to simplify the search process for the end user, data base developers added beginning menus and eliminated many of the earlier search techniques that led to high precision in results. Now, for the first time in the progression through the four major ways of accessing information, we begin to see several common problems that occur when end users do their own searching. They often spend a lot of time at the computer retrieving a large number of citations that are...
too general, or else they retrieve no citations at all, and don't know what to do to find what they really want. Or, they do not know how to look at the results of a search and use critical thinking to determine such things as whether they used the right data base to begin with, whether their results are up-to-date, whether they retrieved what they expected to retrieve, or whether they should perhaps try a different mix of search terms.

The Internet

About two or three years ago the Internet became available to anyone who had browser software and could meet a couple of other technical requirements. It is the ultimate (at this writing) end user product of the 1990s, but using it successfully requires additional understanding and skills that are quite different from the first three methods discussed above. Avid Internet users say “it’s free,” “it’s easy,” and “everything can be found on it.” This writer feels these myths need some debunking.

“It’s Free.” — At this writing, many government agencies, universities, schools, and public libraries provide free access to the Internet for their communities. If you do not have a means of free access, you must pay some sort of Internet service provider a fee for this access. The “free” issue is not over once you are connected to the Internet. I don’t know of any way to search “AgeLine,” “HealthSTAR,” or “PsyclNFO” on the Internet without paying some kind of charge to do so. Use your consumer savvy and critical thinking skills when some commercial site on the Internet (identified by .com in their domain name) makes a claim that seems to be too good to be true.

HealthGate, (http://www.healthgate.com), for example, advertises “Free MEDLINE,” but you must register first, you must be located in the U.S., and you’d best first make sure that the “free” searching option includes the full database and not just a couple of the most recent months, and that you are provided with a full citation and not just an author and title. You can search “HealthSTAR,” “AgeLine,” and “PsyclINFO” on HealthGate, but you must first establish an account with them and then pay monthly use charges. The bottom line is that you need to look at all the options at your disposal to gain access to any database and compare both their charges and what each one is giving you for your money.

In addition to searching the “Grateful Med” version of “MEDLINE” using your own software as described in the previous section, you can also search it on the Internet. Go to http://igm.nlm.nih.gov for this means of access. The “HealthSTAR” database is also available this way.

An excellent summary of all of the ways to access “PsyclINFO” is found at http://www.apa.org/psycinfo/access.html. The differences between “PsyclINFO” and “PsyclLIT” are explained at a Frequently Asked Questions page at http://www.apa.org/psycinfo/faqsexh.html.

In addition to HealthGate, “AgeLine” can also be searched for a fee on the Internet from the NiLightN service (http://www.nlightn.com).

Another aspect of the “free” issue is your time. How much is it worth? Is something “free” when you spend a lot of time looking for it, when the value of what you receive is uncertain, and when server response times are slow?

“It’s Easy.” — Problems for end users become even more numerous and troublesome with the Internet. Now, added to the concerns mentioned above, there are many additional factors of a technical nature with which the user must contend. He or she must find a service provider in order to connect to the Internet and must decide whether to use either a point-to-point protocol (PPP) to establish a direct Internet connection through a dial-up modem or use the much more expensive dedicated Internet connection. The user must then make sure the operating system his or her computer uses is configured correctly to communicate with the host computer of the service provider. As more people use the Internet, the user must contend with longer time delays before connections connect and images download. He or she must keep up with both the new versions of software they are currently using, like their browser, and new software like the plug-ins that must be downloaded and installed to be able to use each new enhancement, like audio or video, that is added to a home page. If the user works with large files, he or she must know how to find, download, and use the additional software needed to read compressed files and files that have been created using Adobe Acrobat. The user must orchestrate all of this and enjoy the challenges that inevitably come up.

Users should understand the most appropriate uses for e-mail, e-mail discussion groups, chat rooms, newsgroups, and forums. Persons using the Internet for serious reasons need to be sure the information they are receiving is authoritative and up-to-date. Researchers should feel some concern when they see a message on a discussion group that begins with “I’m working on a presentation…” or “I’m doing a survey and I’m wondering if you could recommend your favorite…” (you fill in the rest).

Search engines present another set of issues that must be understood. A user needs to know if a search engine accesses just its own database or home page like GeroWeb, if it searches all of Web space like Yahoo, Lycos, etc., or if it searches the other search engines like MetaCrawler (http://www.metacrawler). He or she needs to know if it makes any difference if they insert “and” or “or” between the words entered in the search engine box and what the difference is between searching for “words” or searching for “phrases.” The user needs to understand that two different searches done just a few minutes apart using the same set of terms and the same search engine can retrieve different results.

The user also needs to know if a search engine ranks what it finds by relevancy and what that means. He or she needs to be willing to put up with a lot of irrelevant
material when looking for something very specific. For example, when I asked for information about a home page for the Absolut vodka ads, I was presented with thousands of Web sites because the search engine I used was automatically programmed to read my "Absolut" as a possible misspelling and retrieved everything with the word "absolute" in it as well. In this case, the relevancy function of search engine didn’t work very well.

“Everything Can Be Found on it.” — An awful lot can, and with more and more home pages being added every day, the statement becomes more and more true. The trick is in sorting out the useful Web sites from the frivolous ones. An even greater trick is in knowing whether you should use the Internet at all. If you are looking for something about the social aspects of aging in Thailand, for example, the Internet is one of your best resources. When I entered “aging” and “Thailand” in the MetaCrawler search engine box and requested a comprehensive search on them as words rather than as a phrase, I retrieved over 30 different listings, all of which were quite relevant. When I substituted “aged” for “aging” and ran the search again in MetaCrawler, I retrieved over 45 listings. The results using MetaCrawler were very different from what I retrieved when I searched on “Thailand” in the “AgeLine” database. This is because MetaCrawler searches all of Web space while “AgeLine” searches the printed journal literature and papers in selected collected monograph anthologies of gerontology. These are two very different types of information resources. Another type of information resource that is generally covered better on the Internet than in print are statistics and data sets. If you go to the U.S. Census Bureau’s International Data Base (http://www.census.gov/ipc/www/idbsum.html) on the Internet and select Thailand from the list of countries in the on-screen box, you are presented with the 1995 population totals and the projected population totals for the year 2000 for people between the ages of 65–69, 70–74, 75–79, and 80+ in that country.

Perhaps the Internet, or even a data base, isn’t the right place at all to use for what you are looking for. The person who wants a concise overview of, and a few good references about depression in the elderly, for example, should be using one of the gerontology encyclopedias or handbooks, or one of the standard works by the known experts in geropsychology. They should resist the lure of the online data bases or the Internet for a topic this broad because they are likely to be overwhelmed with hundreds of references and listings.

The biggest trick of all for a user is to first understand the type of information he or she needs at that moment, then to understand the advantages and disadvantages of all the different types of information resources and formats available to him or her at that moment, and finally, to choose the information resource and format that best meets the specific need.

References

Table 1. Resources Described in This Column

<table>
<thead>
<tr>
<th>Name/Type</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet and E-Mail Resources on Aging</td>
<td><a href="http://www.aoa.dhhs.gov/aoa/pages/ipostlist.html">http://www.aoa.dhhs.gov/aoa/pages/ipostlist.html</a></td>
</tr>
<tr>
<td>GeroWeb</td>
<td><a href="http://www.iog.wayne.edu/GeroWeb/GeroWeb.html">http://www.iog.wayne.edu/GeroWeb/GeroWeb.html</a></td>
</tr>
<tr>
<td>AgeLine on SilverPlatter</td>
<td><a href="http://www.silverplatter.com/catalog/age.htm">http://www.silverplatter.com/catalog/age.htm</a></td>
</tr>
<tr>
<td>PsycLIT on SilverPlatter</td>
<td><a href="http://www.silverplatter.com/catalog/psyc.htm">http://www.silverplatter.com/catalog/psyc.htm</a></td>
</tr>
<tr>
<td>HealthGate</td>
<td><a href="http://www.healthgate.com">http://www.healthgate.com</a></td>
</tr>
<tr>
<td>Ways to Access PsycINFO Information Resources</td>
<td><a href="http://www.apa.org/psycinfo/access.html">http://www.apa.org/psycinfo/access.html</a></td>
</tr>
<tr>
<td>NlightN</td>
<td><a href="http://www.nlightn.com">http://www.nlightn.com</a></td>
</tr>
<tr>
<td>MetaCrawler</td>
<td><a href="http://www.metacrawler.com">http://www.metacrawler.com</a></td>
</tr>
<tr>
<td>U.S. Census Bureau, International Data Base</td>
<td><a href="http://www.census.gov/ipc/www/idbsum.html">http://www.census.gov/ipc/www/idbsum.html</a></td>
</tr>
</tbody>
</table>