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Desk Set: Ready Reference on the Web

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Desk Set: Ready Reference on the Web

BY BETH JUHL

"Reference books are the clearing-houses of knowledge. They are libraries in miniature, focusing into a single book information scattered through a thousand volumes. They are short-cuts to learning, pass-keys to the accumulated wisdom of the ages. The ordinary reader knows little of them, and realizes but slightly the great help they would be to him in his daily reading and living." 1

Introduction

eady reference sources are the last of the chained books. Kept close at hand for quick facts, dates, definitions, and quotes, they are never allowed to wander far from the reach of the reference desk. Because they are often sequestered behind a desk, a student must ask to consult them, and yet how many students are aware of the wondrous efficiencies these well-thumbed sources contain? If, after spending hours wading through a Web search, a student dares approach and ask for a number or name, the librarian may gleefully—and justifiably—fling open a World Almanac or Europa Yearbook to the needed information. The student leaves the reference desk with longstanding suspicions about librarians confirmed: they are some sort of supernatural being that communes with the contents of books by touch. Surely, no mere mortal without a library degree could ever obtain this arcane magic.

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One big ready reference remoulade of information, the wide-open Web is already seen by students as the first stop for facts, dates, addresses, and definitions. Librarians, too, have found that Google or Altavista searches will succeed when trusted traditional tools have failed.² However, just as printed reference books are "libraries in miniature" that collect in a single place "information scattered through a thousand volumes," ready reference Web sites can furnish in a few clicks answers that otherwise could require hours of Webcrawling. From the infancy of the Web, librarians collected, organized, and cataloged free reference resources, grateful for both the gratis information and the chance to offer students something outside the walls of the library. But now that trusted reference classics are migrating to Web format, a colder eve must fall on both the free resources and the new commercial products. Do free resources really offer users the authority, completeness, or currency we expect in an academic library collection? Are subscription databases worth the ongoing and extra expense above and beyond their cost in print format, especially when competing against extremely popular full-text journal databases? This essay will attempt to delineate both free and subscription Web resources in a number of standard ready reference categories: almanacs, statistical sources, general encyclopedias, maps and gazetteers, Englishlanguage dictionaries, biographical compendiums, quotation collections, and directories. As Bill Katz wrote long before the advent of the Internet, "Facts approach infinity in number, and as any reference librarian will tell you, so do the reference titles which deal with numberless facts."3 While any claim of comprehensiveness would be an act of hubris, it is hoped that this bibliography will provide a representative selection for comparison.

Reference Gateways

efore reviewing Web resources that actually deliver answers, mention should be made of the most valuable gateway sites providing links for general reference. Internet Public Library Reference Center (IPL), begun in 1995 as a class project by University of Michigan School of Information instructor Joseph Janes, has won so many awards that it takes twenty seconds just to load their page of accolades. IPL continues to collect and add useful general reference links to its Reference Center, which is arranged by genre (e.g., almanacs, biographies, calculators, and conversion tools). The collection does not strive to be comprehensive, but "to help answer specific questions quickly and efficiently." IPL staff have gone beyond collecting links to create several reference tools, including POTUS: Presidents of the United States and Stately Knowledge: Facts about the United States. Although the strict alphabetical sort order for each category occasionally places less important links more prominently than is warranted, the clean, uncluttered screen design, ample annotations, and assigned subject headings make IPL reference pages a pleasure to consult.

In contrast to IPL's simple design, *Refdesk.com* (formerly "My Virtual Reference Desk") presents so many facts, links, categories, and options on its portal-like main page that one gets a little claustrophobic. Editor Bob Drudge, father of new

media reporter Matt of the eponymous Drudge Report and a social worker by training, began Refdesk.com in the same year as IPL, 1995. However, where IPL is selective and descriptive, Refdesk.com is almost maniacally comprehensive with only the tersest of occasional annotations. Drudge's "Site of the Day" e-mail list is a must for those surprising gifts dropped unsought into one's mailbox. Another nice touch on that teeming main page are the quick search box links to standard sources, such as Merriam-Webster's Dictionary or Britannica.com. Research-It!, from iTools, also adopts the search box approach, presenting one long page with two dozen links to dictionaries and thesauri, translators, postal codes, currency converters, and similar lookups.

Librarians' Index to the Internet (LII) offers thousands of links in all subject areas, including ready reference, chosen by librarians and organized by topic. LII was begun by Carole Leita (Berkeley Public Library) as a list of gopher bookmarks back in 1990. Since then, Leita has collaborated with Roy Tennant of UC Berkeley's Digital Library Sunsite, where the LII project now resides. Within the Reference section, one can find links with up-to-date, signed annotations for dictionaries, encyclopedias, statistical sources, and other basic reference tools. "Best of" sites are featured for most categories and, even with its public library focus, LII is a time-saver for those seeking sites with valuable reference content. Like Refdesk.com, LII offers an email alerting service for information on new and featured sites.

Omnibus Sites

ffering actual reference content, not merely collections of annotated links, a new crop of "omnibus" ready reference sites attempts to deliver, if not the whole enchilada of a major research collection, then at least a suitable nacho fit for the home or office reference shelf. *Bartleby.com: Great Books Online* began as a research project in 1993, when founder Steven Van Leeuwen digi-

tized a few Walt Whitman poems on Columbia University's academic computing server. Named for Melville's reluctant scrivener, "Bartleby Project," as it was then known, expanded from literary texts to out-of-copyright reference works, including the ninth edition of Bartlett's Familiar Quotations (1901). In 1997, Bartleby.com was launched on its own server and. since that time, has added several dozen "classic" reference works, including Bartlett's 10th edition (1919), Brewer's Dictionary of Phrase and Fable (1898), Fowler's King's English (2nd ed., 1908), Strunk's Elements of Style (1918, before White), Gray's Anatomy (20th ed., 1918), Emily Post's Eti-

A colder eye must fall on both free resources and new commercial products.

quette (1919), and Robert's Rules of Order Revised (1915). In addition, some recent content has been licensed for the site. including Columbia Encyclopedia (6th ed., 2000), American Heritage Dictionary of the English Language (3rd ed., 1996), Simpson's Contemporary Quotations (1988), and Roget's II: The New Thesaurus (3rd ed., 1995). Bartleby.com also features searchable texts of American and British verse, fiction, and nonfiction, including anthologies such as The Oxford Book of English Verse (1919), in addition to collections of individual authors, such as T.S. Eliot, Frost, Fitzgerald, Shaw, and Stevenson. One can search for a keyword within a specific text, within a subject area (such as reference or poetry), or throughout the entire site. The search engine is not very sophisticated, but Bartleby.com is refreshingly meticulous about providing full bibliographical citations, table of contents, and other ancillary editorial matter for each text (though original text pagination has vanished).

Bibliomania, a British site, offers many of the same public domain texts, as well as an English edition of the Koran, Hobson-Jobson Dictionary of Anglo-Indian Terms, and J.C. Grocott's Index to Familiar Quo-

tations, along with works of literature. However, Bibliomania's selection of reference works is far more limited than Bartleby's, and the lack of any bibliographic information on source texts and editions is dismaying. Although one might hesitate to recommend unreservedly a site that offers so many outdated reference works, Bartleby.com is convenient when currency is not important.

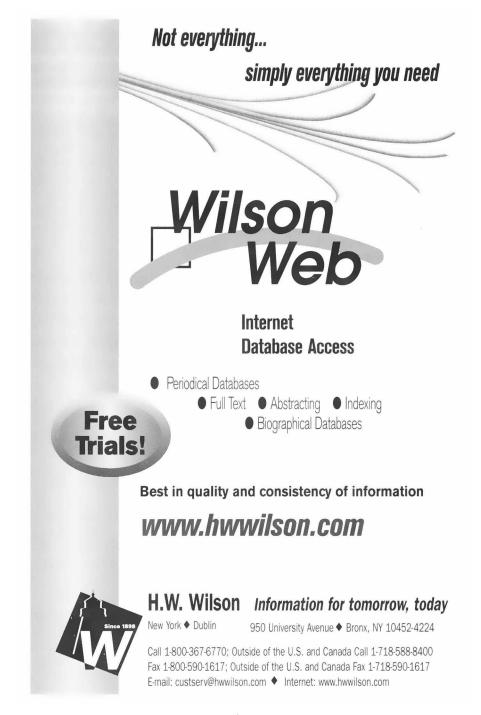
unk and Wagnalls, long a supplier of straightforward reference works for the school and home market, continues that tradition with Funkand-Wagnalls.com, adding a measure of multimedia pizzazz to spice things up. Featuring the complete Funk and Wagnall's Multimedia Encyclopedia, Random House Webster's College Dictionary, Roget's 21st Century Thesaurus, and an interactive world atlas, this site evinces its reference parentage in the thoughtful layout of search and browsing choices. Rather than force each reference work into one search straightjacket, Funkand Wagnalls.com offers customized options for each kind of query. For example, the thesaurus offers a rotating "Editor's Choice" entry showing concepts such as broader or more narrow terms; the dictionary offers quick links to a pronunciation key, guidance on usage, and other ancillary topics; the encyclopedia articles can be browsed by topical area and alphabetically, in addition to a keyword search. Students compiling materials for class presentations will love the "Media Gallery" section, which provides video clips, speeches and other audio files, maps, and still images. Several added attractions at this site, such as current news reports, geographical feature stories, and an "Animal Book" that allows one to search for creatures by name, habitat, continent, or classification, are aimed at a popular readership but are in no way juvenile in tone. Many commercial sites could take a few lessons from Funkand Wagnalls.com's well-organized and focused presentation of a few essential reference tools.

xrefer, though only a few months old at this writing, may well become the killer app in the ready reference category. Like

Bartleby.com, xrefer draws together multiple reference texts with one simple search box. However, where Bartleby relies on many public domain works for its collection, xrefer has formed partnerships with several premier British reference publishers, including Oxford, Penguin, and Bloomsbury. In early September 2000, xrefer offered about 250,000 facts, dates, concepts, definitions, and quotes, drawn from more than 30 reference works, including Grove Concise Dictionary of Music, Encyclopedia of the Renaissance, Oxford Companion to English Language, Oxford Companion to English Literature, Oxford Dictionary of Art, Oxford Dictionary of Music, Penguin Dictionary of Psychology, Penguin Dictionary of Sociology, The Macmillan Dictionary of Women's Biography, Who's Who in the Twentieth Century, Oxford English Reference Dictionary, Penguin Rhyming Dictionary, and Oxford Dictionary of Quotations. The simple page layout is pleasantly plain, with a single box where one can search for names, words, or quotes. Searching, especially for multiple words in a quotation, can be a bit frustrating—for instance, though there are options for truncation and exact phrase, there is no way to specify that both terms must be in a record. Because xrefer employs synonym lists, British spellings ("colour," "theatre") and Briticisms ("lift") do not appear to present a problem. Results lists show keywords in context and the reference source from which the entry is drawn; clicking on the full entry offers the opportunity to navigate to related entries or view entries immediately preceding or following in the alphabet. If xrefer adds titles each month at its current rate it will surely rise to the top of every library's reference links.

Almanacs

refer does not yet offer an almanac, those handy compilations whose etymology remains uncertain but whose usefulness cannot be doubted. Beginning reference librarians are taught that a significant percentage of common questions can be answered by a



good almanac, because it brings together tables, charts, and lists on topics ranging from awards to yearly news summaries to the zodiac. However, in the Web world, where one quick search can quickly locate fairly reliable lists of Nobel laureates and Olympic medalists, astronomical events and weather records, populations and major products, is there still a need for the almanac format? The companies behind *Information Please Almanac* and *World Al-*

manac both appear to think so, though their Web strategies are almost diametrically different.

Infoplease, a part of the Family Education Network, has chosen to deliver the familiar content of the Information Please Almanac and its companion publications covering sports, entertainment, and children's interests in a free, portal environment. Infoplease offers both daily almanac

information (birthdays, an astronomical calendar, weather, events from history) and brief factual information about US and world events, biographies, and articles on topics in science, business, entertainment, and society. It includes a rudimentary atlas, a 125,000-word dictionary, and (like Bartleby.com) the Columbia Encyclopedia (6th edition). The busy opening page offers quick links to various subject areas and a search box that allows one to limit a query to specific source areas, such as the encyclopedia, sports, or entertainment. "Breaking News Stories" and featured biographies are updated daily to lend some currency to the more static encyclopedia and almanac content. Family Education Network claims as its mission "to help children succeed in school," and the banner ads for children's books and clothing, together with special sections of Infoplease such as "Homework Helper," certainly give this resource a K-12 look and feel.

n contrast, World Almanac and Books of Facts is available by subscription from several different vendors, including OCLC's FirstSearch service and as a part of CIS's Academic Universe database. However, neither of these venues offer much more than formatted ASCII text, making pages of tabular data awkward to view and use. In contrast, World Almanac via Facts.com offers some of the most colorful, clear, and eye-catching charts and graphs in any online reference product. The current World Almanac is only one portion of *Facts.com*'s Reference Suite, which includes complete news summaries from Facts on File World NewsDigest (1980-), as well as Issues and Controversies on File (1995-), Today's Science on File (1992-), selections from Editorials on File, Reuters news service, and Funk & Wagnall's New Encyclopedia. The resulting database delivers the sections one expects from a traditional almanac, including calendar features such as Born on This Day or This Day in History as well as broad topical areas such as Nations of the World, Economy and Business, and Science and Technology. But Facts.com enriches almanac entries with a wealth of links to and from news stories collected by the Facts on File

news and editorial services, in effect extending the almanac concept forward in time with daily and weekly updates for current breaking news and backward with 20 years' past news features to provide background and context. Features include a search interface that allows one to limit to a specific date or range of dates, a menu offering almanac "favorites," and top news stories, 1980 to the present. Those libraries with print subscriptions to the reliable if bulky Facts on File news binder services may well consider an upgrade to Facts.com.

Given this multitude of numbers free for the taking, why would one need to purchase access to statistical data?

A few more specialized almanacs also deserve mention. Famous First Facts has long been a favorite reference book for idle browsing, but even with detailed indexes by topic, year, and place, it could be difficult to find the needed fact in Joseph Nathan Kane's remarkable compilation of events, persons, and inventions from US history. Now H.W. Wilson has made the fifth edition (1997) of this reference classic available as Famous First Facts on Wilson Web. One can search by subject descriptor, personal name, city, state, or date, as well as keyword in entry. Students or college presidents who need that great bit of trivia for term paper or campus address will seldom come away empty-handed. For those needing basic information on birthdays or anniversaries of famous events, there are numerous free "Today in History" sites on the Web, three of the most useful being offered by the History Channel (This Day in History via the History Channel), the Library of Congress (Today in History via the American Memory Project), and PBS (PBS-History). Chase's Calendar of *Events* goes beyond simple anniversaries to deliver background and contact information for more than 12,000 upcoming holidays, festivals, fairs, and commemorative days, weeks, or months. Each entry is searchable by keyword, name, category, place, or date; many entries include e-mail or Web addresses. At *less* than the price of a print copy, the online *Chase's* is a rare subscription bargain in the Web world.

Statistics

oth World Almanac and Info-Please are rich in statistics, but no ready reference collection would be complete without Statistical Abstract of the United States, which draws together tables of social and economic data produced by federal agencies, as well as some industry and trade associations. At the U.S. Census Bureau Web site, one can browse PDF (portable document format) files of tables from the last five years of the print Statistical Abstract, together with hundreds of other reports and tables in various formats. The Census Bureau site seems to change with every season, but two stable features that give speedy access to most data are the A-Z subject list and the quick jumps to state and county facts. FedStats offers a convenient gateway to publications produced by 70 federal agencies, with access by agency name, broad topic area, or state. Through FedStats, one can locate Web counterparts of familiar ready reference sources, including Agricultural Statistics (through National Agricultural Statistics Service), Digest of Education Statistics (National Center for Education Statistics), Occupational Outlook Handbook (Bureau of Labor Statistics), Vital Statistics of the United States, (CDC National Center for Health Statistics), and Sourcebook of Criminal Justice Statistics (U.S. Department of Justice Bureau of Justice Statistics). However, government agencies have no monopoly on US statistics. American Demographics magazine offers a fully-searchable archive of its articles back to 1993; here one can type in a terms such as "pets" and immediately find several articles and charts detailing American's obsession with the furry and feathered. For historical demographic data at the county level, United States Historical

Census Data Browser Web site (Univ. of Virginia) allows one to select and chart variables from the first (1790) through 19th (1970) decennial censuses.

For international coverage, CLA's World Factbook goes beyond statistics on economic activity and demographics to provide some narrative description for each country or region profiled, including geography, telecommunications and transportation infrastructure, and political situation. It would be a shame if some students and faculty were put off by the sandbox-set sound of "Cyber School Bus" frame for the UN's InfoNation Web page, since the statistics it delivers are from the very grown-up Statistical Yearbook and related series. Users can select from one to seven countries for comparison, then select data elements from four major categories: geography, economy, population, and social indicators. Both the UN (United Nations Global Statistics) and the Census Bureau (U.S. Census Bureau: Statistical Agencies [International]) also offer gateways to statistical resources for individual countries and to international organizations that collect and publish statistical data.

Given this multitude of numbers free for the taking, why would one need to purchase access to statistical data? Congressional Information Service is betting that, with so many places to look for statistical information, libraries will be willing to invest in authoritative indexing in order to identify the best resources quickly. Their Statistical Universe is the Web incarnation of three familiar CIS products, American Statistics Index (ASI), indexing publications of the federal government; Statistical Reference Index (SRI), indexing state and privately published data; and Index to International Statistics (IIS). Libraries can purchase any combination of the three, and can also add various full-text components (similar to CIS fiche collections) on topic areas such as agriculture or education. To be sure, a fully integrated version of Statistical Abstract comes as part of the base subscription, as do links to many free statistics on government Web sites, but the real value of Statistical Universe is the tablelevel indexing and abstracting that gets researchers far closer to the data they need than rather vague publication or series titles will. The *Matter of Fact* database (the awkwardness of whose full name, *Statistical Abstracts from* A Matter of Fact, masks that it is an entirely different publication from *Statistical Abstract of the United States*) excerpts periodical articles, industry reports, and government publications back to 1984. Like the *American Demographics* Web site, *A Matter of Fact* is a trove of quotable quips on topics as varied as the oil depletion allowance or the premium olive oil market.

Encyclopedias

ibrarians roll their eyes at the metaphor of the Web as "one ✓ big encyclopedia," but few areas of reference publishing have changed so radically or rapidly as that of general encyclopedias. In 1998, college and university libraries happily paid from hundreds to thousands of dollars a year for Britannica Online, the electronic version of that monarch of the encyclopedia genre. Less than two years later, those same libraries found it hard to justify paying any amount for a subscription when that same core content was made available free of charge via Britannica.com, the venerable publisher's new venture into the Web portal frav. At this writing, it is not clear if Britannica's strategy will pay off, but Britannica.com certainly delivers pay dirt for those seeking free but authoritative information on the Web. One of the mysteries of e-commerce is that the free Britannica.com actually offers more information and more functionality than the fee-based Britannica Online. While both versions provide more than 72,000 current encyclopedia articles, 10,000 images and illustrations, the searchable contents of Merriam-Webster's Collegiate Dictionary (10th edition), and links to more than 125,000 additional Web resources, Britannica.com also offers links to current articles from more than 70 popular periodicals (Newsweek, History Today, Sports Illustrated), as well as basic title and author information from the Books in Print database (with 60,000 reviews from Choice). The

free version also seems easier to search and navigate. Although the subscription title asks for capitalized Boolean connectors (AND, OR, ADJ), Britannica.com offers an advanced search menu with familiar fillin-the-blank boxes and pull-down options. In results lists, Britannica.com seems to display the most relevant material first more consistently than Britannica Online. From Britannica.com, one can e-mail or print articles. Britannica Online does offer additional articles from Britannica Book of the Year, and librarians appreciate the "how to cite this article" instructions that appear at the end of each entry; in addition, Britannica has also promised additional curriculum materials and course links for college users to complement the specialized databases they have created for the primary and intermediate grades. Since Britannica.com delivers more to average searchers than the subscription version, banner ads seem a small price to pay.

With Britannica's premier content available free for the searching, students may not need to explore additional free encyclopedias elsewhere on the Web; some seem hardly worth the surfing time. *Nupedia.com*, launched in Spring 2000, is an intriguing idea that has not yet been realized: an "open source" encyclopedia inviting articles from volunteer experts and editors. Editor-in-chief and Ohio State philosophy graduate student Larry Sanger started *Nupedia* with the goal of creating the "largest general encyclopedia in history" but, as of this writing, only a few articles on musicological topics were available.

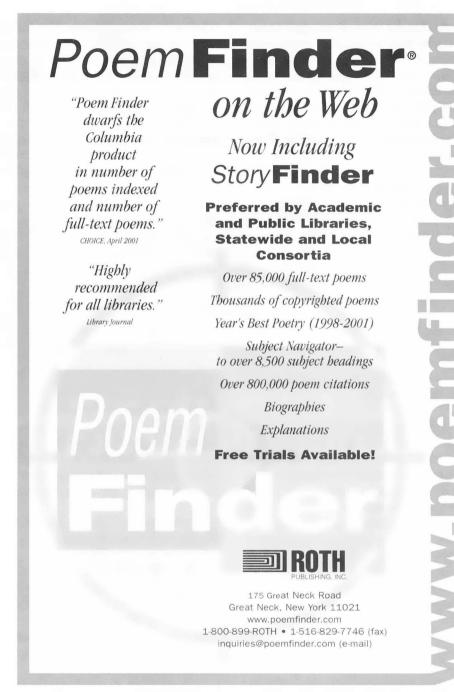
Nupedia is a little too, well, new to be useful, but Compton's Encyclopedia Online seems to belong to the past. When viewed late last year, it had apparently not been updated since early 2000; Current Events featured news stories from March 2000, and Web links and teaching resources were no longer being maintained. This gradual withering away will be a loss since, despite its less sophisticated style intended for the home and school market, Compton's offered animated films and slide shows and several other interesting multimedia features.

Microsoft's Encarta reference encyclopedia has become a staple in the home library, and a subset of the Encarta Encyclopedia CD-ROM / DVD, together with the Encarta World Dictionary and a simple atlas, is available free on the Encarta Web page. A basic search box provides quick access to approximately 12,000 encyclopedia articles with linked images and additional Web resources. Encarta's brief articles are sufficient for quick look-ups, but the site is often jammed with traffic and slow. In extensive exploration of a topic, one usually runs into content that is restricted to registered users who have purchased Encarta disc products.

A sister Microsoft Web site, Africana. com, tantalizes with the possibility of some articles drawn from the popular Encyclopedia Africana, ed. by Kwame Anthony Appiah and Henry Louis Gates, and from its companion CD-ROM, Encarta Africana. However, Africana.com serves primarily as a portal for events and topics about Africa or of interest to the African American community. Searches for encyclopedia content retrieve only promotional ads for the print or CD-ROM publication.

Infonautics' Encyclopedia.com grabbed the most obvious domain name of the bunch, but its 14,000 brief articles drawn from the Concise Columbia Encyclopedia (3rd edition, 1994) seem to serve primarily as teasers to entice users to purchase related documents and images from the vendor's Electric Library service.

As mentioned above, both Bartleby.com and Funkand Wagnalls.com are graced with useful general encyclopedias, and these two sites offer the strongest challenge to Britannica.com as purveyors of free content. Bartleby's sixth edition (2000) of the unabridged Columbia Encyclopedia includes 50,000 short articles about people, places, events, and ideas. Though the entries seldom extend to more than a few sentences, the richly hyperlinked text (more than 80,000 cross-references are claimed) and up-to-date coverage make this encyclopedia an excellent first stop for the odd fact or date. Many tables, on topics such



as constellations or Roman emperors, are included. Funk and Wagnall's Multimedia Encyclopedia, in contrast, offers articles ranging in length from a paragraph to several pages; longer articles are occasionally signed. Where Columbia offers plain text tables, Funk and Wagnall's strength is graphics, with almost every article accompanied by at least one illustration, map, or photograph, in addition to the occasional video or sound clip.

Britannica.com is an excellent addition to any collection but, like any free Web resource, is possibly transitory. For campuses seeking stability in a reasonably priced subscription encyclopedia, Grolier's Encyclopedia Americana Online provides authoritative and up-to-date content online at costs comparable to annual purchases of the print version. Like Britannica, Americana offers a dictionary (The American Heritage Dictionary of the En-

glish Language, third edition), links to popular periodical articles (drawn from publications such as Time and Christian Science Monitor) and links to related Internet resources (more than 155,000). Although its 45,000 articles and approximately 5,000 images, tables, and maps fall short of either version of Britannica in raw numbers, Americana benefits from frequent updating (with new or revised articles added quarterly) and supplementary material such as Americana Journal, which provides articles written by encyclopedia staff on recent events, searchable by country or date. Navigation is made easy by recurrent icons for items such as article table of contents, maps, flags, or Web links and by the simple search box that allows one to limit a search to article titles or full text. The advanced "query builder" allows fairly sophisticated searching and limiting but involves so many steps and browser windows that most students may well abandon their search long before they see results.

Highly specialized subject encyclopedias, such as the new art and music databases from Grove or the amazing volunteer effort to place Catholic Encyclopedia online, fall beyond the scope of this article. However, Access Science must be mentioned as an excellent resource for quick science questions, for background and biographical essays on technology topics in the news, or for in-depth queries requiring lengthy articles and bibliographies of recommended sources. McGraw-Hill has been promising a Web-based version of the trusty Encyclopedia of Science and Technology for several years, and Access Science does not disappoint. Users can search by keyword or browse in 20 broad topical areas ("Chemistry," "Paleontology") in this clean, uncluttered Web site that relies on a limited color palette, simple text, and few graphical devices to help researchers find needed information quickly. In addition to more than 7,000 articles drawn from the 8th edition of Encyclopedia of Science and Technology (1997) and the 1998 and 1998 Yearbooks of Science and Technology, the Access Science site offers 115,000 brief definitions from McGraw-Hill's Dictionary of Scientific and Technical Terms (5th ed.,

1994) and 2,000 biographies from the encyclopedia and from Hutchinson Dictionary of Scientific Biography (1999), with annotated links to related Web sites for most subject areas. News stories on scientific topics, updated weekly and drawn from Science News, are featured on the Access Science entry page, as are new or recently updated encyclopedia articles, giving Access Science the currency and immediacy one needs to keep up with the frenetic pace of technological innovation. Students, who can so often flounder in the recondite specificity of technical resources, will appreciate the Study Guides section, which allows one to navigate through a broad topical area, such as "Ecology and Conservation." and to place individual subjects, such as "Biomass" or "Ecosystem," within a larger framework. The printed Encyclopedia of Science and Technology has always included rather plain line-drawings and diagrams, and Access Science currently offers only about 3,000 of those same workmanlike illustrations. Promotional materials promise more, and more colorful, images in the future; one hopes that some of the inventive multimedia McGraw Hill incorporated into previous CD-ROM products will also find their way into Access Science.

Maps and Gazetteers

ost Web general encyclopedias include basic country maps. Both CIA's World Factbook and maps.com, an online map store, also offer rather plain outline country maps sparsely studded with a few major cites and limited geographical detail. For something more detailed, the popular MapQuest provides surprisingly elegant country maps, with a convenient "printer friendly" button. Beyond country and state maps, and the expected driving directions and address plotters, MapQuest offers special sections with a travel focus, such as US national park or international airport maps. National Geographic's Map Machine offers some exquisite satellite and relief images, but the less well known Atlapedia Online site seems to get one more quickly to a political or relief map for a specific country. Both *Map Machine* and *Atlapedia* also provide basic information about each nation similar to that found in almanacs. Faculty who need to give map assignments or quizzes will appreciate the collection of blank and outline maps to be found in *About.com*'s collection of links.

MapQuest and many city or business directory sites provide driving directions and street maps, but users who need physical or political detail for US locales may wish to consult Color Landform Atlas of the United States, by Ray Sterner (Johns Hopkins), which provides a relief, satellite, county outline, and historical map for each state, with links to state maps on other sites. Newcomer Topo Zone claims to contain every USGS topographic quadrangle map for the US but, since there are almost 70,000, it is difficult to confirm this statement. Topo-Zone users can search by place-name (even those that are not quadrangle names), latitude, and longitude. Results lists display place-name, county, state, elevation, and quadrangle name.

U.S. Census Bureau's TIGER Mapping Service (Topologically Integrated Geographic Encoding and Referencing) draws maps using criteria selected by the searcher, such as highways. Indian reservations, water bodies, or other features. A more frequent ready reference use is the ability to search for a specific city or town or zip code area, then see that place on a manipulable map. An impressive array of historical US topics is offered at Map Collections: 1544-1999, on the Library of Congress' American Memory site. Maps are organized by several broad themes, such as "Transportation and Communication" and "Conservation and Environment"; most collections can be searched or browsed for subject, creator, or place.

The USGS has developed two different online gazetteers in collaboration with the US Board on Geographic Names. USGS Geographic Names Information System (GNIS) provides alternate names, elevation, state and county, latitude and longitude, and topographic quandragle names for almost 2 million places in the US, while Na-

tional Imagery and Mapping Agency GEOnet Names Server supplies latitude and longitude for more than 3.5 million places outside the US (excluding Antarctica, which has its own database). For more descriptive entries on locations throughout the world, one can look forward to the publication of Columbia Gazetteer of the World online in 2001.

Dictionaries and Thesauri

common embarrassment of the computer era is a too-trusting reliance on the spell-checker as dictionary. Since word processors, e-mail programs, and other software now come bundled with a vocabulary similar to that of a good desk dictionary (circa 100,000-200,000 words), with spell checking, synonyms, and grammatical advice built in, getting up from the keyboard to consult a book has come to be regarded as a downright nuisance. However, with so many quality dictionaries and thesauri now available free on the Web, one can stay put and still not be limited to the less-than-imaginative suggestions of a blinking cursor.

One uses a dictionary for many reasons besides correct spelling, lexical meaning, and synonyms: for proper usage, pronunciation, historical background and etymology, or for difficult plural, adjectival, or adverbial forms. The best college desk dictionaries will also supply gazetteer information, some biographical entries, illustrations and examples of difficult concepts, and other supplementary materials. Free dictionary sites on the Web supply many of these features, though no one resource is yet able to deliver them all. Dictionary.com from Lexico offers no-frills simple word look-ups that retrieve results from several different dictionaries, including American Heritage Dictionary of the English Language (3rd edition, 1996, 1992) and Webster's Revised Unabridged Dictionary (originally published 1913); most entries include only pronunciations and brief definitions, without links to related words. Lexico also offers a version of the original Roget's Thesaurus, Theasurus.com, with a few more

search functions, such as browsing by headword or by Roget's broad hierarchical categories (e.g., "space," "matter"). The edition and date of this thesaurus are not given but, suffice to say, this is not the best source for synonyms of "gnarly" or "dweeb." *Dictionary.com* also offers features common to other lexicographical resources, such as a word of the day, links to foreign language dictionaries, a Web page translator, and links to additional Web resources.

Not to be confused with Dictionary.com, Your Dictionary.com may be familiar to some readers as the former Web of Online Dictionaries, developed by linguist Robert Beard (Bucknell). With the goal of becoming "the most authoritative and comprehensive Web portal specializing in information about language," this site is really a gateway to lexicographical resources all over the Web. Although YourDictionary.com offers a simple search interface to Merriam-Webster's Collegiate Dictionary and Thesaurus, the best reason to consult it is to identify hundreds of specialized language or subject dictionaries available from other sites. To actually search across more than 600 Web dictionaries of varying age and authoritativeness, try Onelook Dictionaries. Results are presented in one list, organized by category of dictionary (e.g., General, Slang, Medical). In addition to the English-language search, one can find here translations for terms in Spanish, French, German, and other languages and foreign-language definitions for English words.

Most Web general encyclopedias include basic country maps.

For the general public, "Webster" is synonymous with "dictionary," and *Mer-riam-Webster Online* delivers a free searchable version of their longtime bestseller, *Merriam-Webster's Collegiate Dictionary* (10th edition, 1999) as well as the companion *Collegiate Thesaurus*. Simple "Look

it up" search boxes allow one to search for any of 150,000 headwords, but one cannot search through the entry text for keywords. There is currently no way to browse alphabetically, though one can force a browse list by "premature truncation," (e.g., "ma*" will retrieve several hundred entries beginning "ma"). Misspelled words are greeted with helpful suggestions of homophones or near (or distant) matches; for example, "fulish" will retrieve "foolish," "follies," "folio," and "foliate," among others. Dictionary entries contain pronunciation and part of speech, etymology, definition, and example usage; simple line drawings from the Collegiate Dictionary are also included, as are tables. Thesaurus entries include synonyms, antonyms, and contrasted or related terms, with occasional links to broader terms.

hile Merriam-Webster recently celebrated 150 years of lexicography, Microsoft's Encarta World English Dictionary emphasizes its newcomer status. When the print Encarta dictionary and companion CD-ROM were first published in 1999, rival publishers hunted down its errors and hooted nanny-like warnings against potentially offensive words and phrases. But its decidedly international scope and currency have made this resource a hit in the home market. The online version offers all 100,000 word entries from the printed counterpart, though 10,000 persons or places from the print version have been omitted, as have the illustrations. Definitions tend to be quite short and written in very simple terms; etymologies, too, tend to be less extensive than in Merriam-Webster's, and most entries do not include examples of usage. However, users will appreciate the audio pronunciation guide for each entry.

While most searchers will leave Wordsmyth: The Educational Dictionary-Thesaurus satisfied with a simple word lookup, the real strength of this site is its sophisticated search capabilities. Although, at 50,000 headwords, it contains approximately one-third the entries of Merriam-Webster or half those in Encarta, Wordsmyth goes beyond an electronic dictionary to be-

come something like an online word maven. The basic search allows one to specify exact, broad, or "sounds like" matches; the advanced search functions as a reverse dictionary, with pull-down menus of options for searching keywords in definitions or for part of speech, with the ability to customize results to show any combination of pronunciations, definitions, examples of use, synonyms, similar words, inflected forms, derived forms, and cross-references. Wordsmyth emphasizes current American English usage, and no etymologies are provided; it is not apparent what print source, if any, was used in its construction. But the extras, such as the crossword and anagram tools in the "Foundry" section, make this a site as much for leisure browsing as for reference work.

s mentioned above, several encyclopedia or omnibus sites include English-language dictionaries, such as Merriam-Webster's Collegiate Dictionary (available from Britannica Online) and Oxford English Reference Dictionary (from xrefer). Random House Webster's College Dictionary via Funkand-Wagnalls.com and Roget's 21st Century Thesaurus (both 2nd edition, 1999) are especially noteworthy in this category, as are Bartleby.com's versions of American Heritage Dictionary of the English Language (4th edition, 2000) and Roget's II: The New Thesaurus (3rd edition, 1995). Random House Webster's contains approximately 165,000 entries while American Heritage Dictionary in Bartleby offers about 90,000 entries and 900 color illustrations; both dictionaries offer pronunciation guides and etymologies. The two thesauri also share many similarities and a few differences. Bartleby's Roget's II offers a list of synonyms with links only to broader terms (for example, from "muse" to "thoughts"). Funk and Wagnalls's Roget's 21st Century contains many more hyperlinks within each entry, though navigating the number of broader concept categories can be a bit complex.

Hundreds of more specialized English dictionaries have proliferated on the Web; one or two merit mention here for use in ready reference situations. *WorldWideWeb Acronym and Abbreviation Server*, com-

piled and maintained by Peter Flynn (Univ. of Cork), promises so much with its title but offers only 17,800 entries. In contrast, Mountain Data Systems' Acronym Finder contains a much more substantial 181,000 entries, but still falls far short when compared to similar print resources, such as Gale's Acronyms, Initialisms, and Abbreviations (26th ed., 1999). Hutchinson's Dictionary of Difficult Words has a deliberately limited scope, offering almost 14,000 multisyllabic and troublesome terms. Word Spy is a nifty source for neologisms and techie jargon. Paul McFredies, an author of computer guides, adds a new word or phrase each weekday to the Word Spy database, which can be searched by keyword or browsed. Though it has the expected preponderance of computer-related terms, such as "cybertage" or "entrepenerd," one can find in Word Spy many clever recent coinages from popular culture or academic publications, such as "affluenza" or "YODA" (Young Opinionated Directionless Academic). For librarians and fact-checkers, one of the real boons of Word Spy is its meticulous attention to derivation and attribution, including frequent excerpts from news transcripts or articles using the term in context.

Cambridge University Press makes four English-language dictionaries (Cambridge International Dictionary of English, 1999, Cambridge Dictionary of American English, Cambridge International Dictionary of Idioms, and Cambridge International Dictionary of Phrasal Verbs) available as part of its Cambridge Dictionaries Online site, but it is Oxford that comes to mind when we think of the great dictionaries, and no reference review would be complete without a tribute to Oxford English Dictionary Online in its new incarnation. True. one doesn't need the OED to answer most simple word questions, and offering this lexicographical cornucopia to undergraduates as a good basic dictionary might traumatize them into stunned monosyllabism for life. But, just as one can't imagine a good college reference collection without James Murray's 1928 first edition or the expanded (but not completely revised) second edition of 1989, the online OED is a must for any academic library.

Bear in mind, the online incarnation will probably be the only format for the completely revised third edition. The project is to be completed in 2010, but current subscribers can now enjoy approximately 1,000 new or revised entries each quarter. The OED designers have done an excellent job building a clear and easy-to-navigate interface to an incredibly complex data structure. Those who purchased and then were put off by the CD-ROM version of the second edition, which seemed to be designed only for users willing to invest hours in learning and customizing the byzantine search and output features, will be especially pleased by the Web version. Offering both a simple headword search and an advanced search that lets one perform word, exact phrase, or proximity searching through the full text of entries, definitions, etymologies, quotation texts, quotation dates, quotation authors, or quotation work, OED is a powerful tool indeed with which to prospect for lexicographical treasure. Where else could one find that Mrs. Gaskell provides the first documented example of the use of "earlyish," or that the whimsical adjective "fev" until very recently had the grim meaning "doomed to death"? In presenting search results, too, one has options never dreamed of in the print environment; one can sort all matches by date or, for more complex entries, view a date chart showing usage patterns by century. There is a clear distinction between entries from the second edition and entries revised for the new edition that one hopes is retained even after 2010, for part of the joy of the OED is watching the history of our language at work.

wo more specialized dictionary sites deserve mention. Brewer's Dictionary of Phrase and Fable, one of those lifesavers in reference work, provides interpretation of arcane allusions, insight into opaque parables, and explanations of "words with a tale to tell." Although the current edition (15th, 1995) is not available on the Web, Bartleby.com contains the revised edition of 1898. Much has been added and updated in the last 100 years, but one can quickly find the answers to many mysteries here, from the months of the

French Republican calendar to an explanation of Emperor Caligula's nickname. *Symbols.com* offers more than 2,500 symbols, arranged in 54 different categories of graphic type. Based on the same system of organization as Carl G. Liungman's *Dictionary of Symbols* (1991), this unusual site allows one to search for a symbol by keyword, such as "winter" or "wood," or by graphic characteristics, such as crossed lines or symmetricity.

Quotations

he OED can be used for quotation searching, though its examples of historical usage aim for the typical and commonplace, not for the pithy saying or witty verse one usually seeks in a quotation compendium. The maddening thing about hunting for quotations on the Web is that they are so very easy to find there. But what exactly is retrieved when a quote is plugged into an average search engine? All too often, one scrolls through dozens, hundreds, even thousands of hits with slightly varying versions of a quote, attributed to various people, in creative and idiosyncratic script fonts. Even if there is a consensus on attribution, one continues to fret about accuracy: where and when, exactly, was this thought uttered or written? A quick browse through popular quotation pages reveals a maddening laxity on matters of citation, though most offer keyword or topical searching in addition to idiosyncratic features.

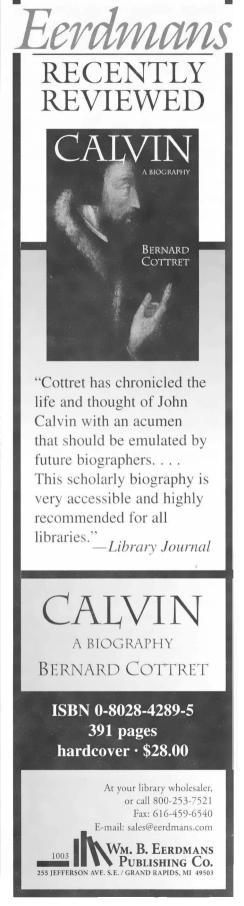
The Quotations Page boasts only about 3,200 quotations, though its search engine also retrieves relevant quotes from other Web sites, including treats such as Ambrose Bierce's The Devil's Dictionary. Haythum Raafat Khalid's Famous Quotations Network focuses on historical quotes and includes a list of several hundred proverbs by country. Laden with enthusiasm and exclamation marks, Cyber Nation's Quotation Center offers a large database of more than 13,000 quotes on inspirational themes. Only Quoteland (formerly Land of Quotes) offers occasional bibliographical citations, since its database has swallowed items from

some previously published reference works, including Famous Last Words (1961), Bartlett's Unfamiliar Quotations (1971), Crown Treasury of Relevant Quotations (1978), and Magill's Quotations in Context (1965; 1969).

Here again, Bartleby.com delivers more authoritative, if less than up-to-the-minute, resources, with its versions of Bartlett's Familiar Quotations (both the ninth edition, 1901, and the tenth edition, 1919) and Simpson's Contemporary Quotations (1988). Between them, these three sources offer more than 21,000 quotes. As with other Bartleby.com files, the search interface often retrieves false drops and unrelated quotes (e.g., a search for Eleanor Roosevelt finds also Eleanor Clark and Theodore Roosevelt). But the reason for starting with this page is the careful source citations for each entry, down to page number in many instances. The same careful attribution can be seen in xrefer's collection of more than 25,000 quotations drawn from Bloomsbury Biographical Dictionary of Quotations (1997), Bloomsbury Thematic Dictionary of Quotations (1997), and Oxford Dictionary of Quotations (1999).

Simpson's Contemporary Quotations can also be found in the reference section of CIS's Academic Universe/Lexis-Nexis subscription service, and LION: Literature Online database from Chadwyck-Healey/ProQuest is a trove for the obscure line from English drama or verse. But no library would subscribe to these enormously expensive resources just for their quotation possibilities.

To date, no commercial quotations database is available on the Web, but two poetry collections offer excellent access to oft-quoted verses. For almost 100 years, librarians have used Edith Granger's *Index to Poetry* to identify and locate specific poems by title, first line, or subject. However, the print format has obvious limitations—for example, often it is not necessarily the *first* line of a poem that one recalls. Columbia University Press first published a CD-ROM version of the index in 1991 and launched the Web version,



Columbia Granger's World of Poetry Online, last year. The recent editions of Granger's Index can be found here in their entirety, supplemented by the complete text of poems drawn from other Columbia publications, such as The Classic Hundred Poems (1990; 1998) and The Top 500 Poems (1992), as well as more than 4,000 poem excerpts from Columbia Granger's Dictionary of Poetry Ouotations. The editors have also sought to incorporate full text from public domain works, bringing the database to more than 13,000 poems in full text at the end of 1999. More than 300 author biographies, commentaries on important poems, and a glossary of poetry terms aid students seeking more information on a particular poet or work. Simple and advanced search menus allow searching by author, keyword in poem title, last or first line or in full text, poem subject, or author category. In the search results screen, icons indicate links to full text or excerpt of poem (when available), author information, poem commentaries, and information on where the poem can be located in anthologies or other collections.

Granger's chief competitor is Roth's Poem Finder, which dwarfs the Columbia product in number of poems indexed (more than 750,000) and number of full-text poems (70,000). Poem Finder also began life as a CD-ROM in 1991, and now indexes works from more than 3,500 anthologies and 5,000 single author collections; particularly valuable is its coverage of poems published in periodicals such as The New Yorker and Tri-Quarterly. Poem Finder's advanced search feature gives access to several categories not found in Granger's, including a search by author's nationality or gender; the "Subject Navigator" feature groups poems into a dozen broad thematic hierarchies such as "Places" or "Nature," from which one can search through 8,500 more specific headings. Searches retrieve brief citations with links to full text or anthologies in which the poem can be found; citations are satisfyingly specific, usually down to the actual page number where the poem occurs. A growing section called "The Year's Best Poetry" anthologizes poems published from 1998 on; the "Kid's Korner" will be less useful on

college campuses. Though it would be difficult to justify adding both *Granger's* and *Poem Finder* to a collection, either would be a worthy purchase, providing instant access to poems within and beyond an institution's print collections.

Biographical Dictionaries

The Arts and Entertainment Network's Biography.com supplies brief biographies for more than 25,000 individuals. One expects it to emphasize celebrities, but many entries are drawn from Cambridge Dictionary of American Biography (1995), hence Caesar Rodnev is found alongside Sid Caesar and Rodnev Dangerfield. Nevertheless, the bias towards entertainers and the recently famous is pronounced: Elizabeth I is given 250 words while more than 1,000 are devoted to Elizabeth Taylor, along with a photograph, a fairly complete filmography, and hotlinks to assorted husbands and colleagues elsewhere in the database. Users can search by first or last name or browse an alphabetical list; there is no full-text search capability. Keyword and date searching are both available for the 28,000 people in Biographical Dictionary offered by S9.com, but its entries are generally only one sentence long and there is no on-site explanation of who or what S9 is or what biographical sources were consulted in its creation. Rather than offering a dictionary of biographical sketches, Lives, The Biography Resource indexes and links to biographical materials located all over the Web. It emphasizes profiles of deceased persons, and short reviews accompany many links. Historians will enjoy the many links to primary source materials, such as diaries or memoirs, but the inclusion of many fan sites and subject sites with some biographical content (more than 16 links to various Hemingway pages) can make searching Lives something of a slog, rendering it less than ideal for quick reference questions.

Saur's *World Biographical Index* (WBI) delivers access to more than 2.5 million biographies scattered through their microfiche research collections of more than 4,400 bi-

ographical sources from North America, Europe and, most recently, Africa. This site can be a trove for those seeking to locate a few very basic facts on the once-famous who have since been lost to history. WBI allows searches for persons by name, gender, time period, occupation, or country. Most entries include birth and death dates. the microfiche collection from which the entry is drawn, and an abbreviated citation to the source reference work that includes the biography. Navigation can be infuriatingly nonintuitive; the multiple open windows never seem to be sized correctly to fit on one screen, and searching or display options are not obvious. However, those who have tried standard reference sources and come up short may find this database useful. Even if the needed reference source is not available in one's own library, WBI provides a spyglass to identify biographical information that may be available elsewhere. Gale makes a similar service available in its free Literary Index, which indexes 130,000 biographical profiles of authors found in forty Gale series such as Contemporary Authors and Dictionary of Literary Biography.

These free sites can yield the basic facts, but for essays and life histories beyond birth and death dates, searchers will usually need to turn to one of the new subscription services that came online in the last year. Although most libraries will be hard pressed to pay for both Gale's Biography Resource Center (BRC) and Wilson Biographies Plus Illustrated, they will have a difficult time selecting one of them over the other. Both offer biographical sketches and illustrations drawn from the publishers' previous print publications, and they overlap considerably in coverage and design features, though with profiles of more than 165,000 people, Biography Resource Center may seem to dwarf the Wilson product, which has only 72,000. Gale delivers entries from familiar series such as Contemporary Authors and Contemporary Black Biography, from St. James Press imprints such as Contemporary Artists and Contemporary Dramatists, and from titles obtained in their recent acquisition of Macmillan Reference, most notably Dictionary of American Biography.

Faculty will appreciate the inclusion of profiles from the current Directory of American Scholars. For an additional annual fee. libraries can add more than 950,000 thumbnail biographies from the various recent Marquis Who's Who titles. A search in Biography Resource Center can retrieve up to six different kinds of results: thumbnail biographies of a few hundred words or less. narrative biographies, magazine and journal articles drawn from 250 popular periodicals in the InfoTrac database, Web sites, and "additional resources," which seems to promise supplementary bibliography but which seldom delivers more than citations to Gale's Almanac of Famous People. Blackand-white portraits or photographs are included for approximately 8,000 profiles. Full-text search is available, and the "custom search" feature allows one to search by specific criteria, including occupation, nationality, ethnicity, gender, and birth or death year or place. Gale has worked earnestly to reconcile variant name forms, but there are some sloppy typographical errors and confusions that frequent users of Gale print products may recognize; for example, a search for Elizabeth I retrieves a list with three different forms of her name; a link to a Web site for Sappho misspells her name as "Sapphho"; the entries for Sarah Caldwell, the conductor, and Bettye Caldwell, an anthropologist, are conflated. A problem with all online biographical sources is currency; students consulting a printed biographical source can tell by the look and wear of a volume whether the information it contains is up-to-date but, in the online world, those sensory cues are absent and locating a copyright statement on essays requires some persistence. Gale seems to strive to alert searchers to the recently deceased by the addition of a "Latest News"category with brief obituaries; periodical articles have been included to help students update biographical sketches that can be decades out-of-date. A major disappointment with BRC is Gale's decision not to include what had been their premier biographical database, the Biography and Genealogy Master Index (BGMI), which would lead students to additional biographical print sources on their topic. One hopes that BGMI will eventually be

incorporated into what Gale promotional literature calls "the most comprehensive site on the Web today."

What better use could be made of technology than opening up static A-Z or subject lists for access at multiple points?

Biographies Plus Illustrated (BPI) exhibits a parallel gap. Citations from Biography Index have not been included, so once again, students will not be directed to all related print materials in the library (though a forthcoming database, Biography Reference Bank, will include Biography Index). In most other ways, however, this database delivers. Although it offers fewer entries than the Gale product, profiles tend to be longer on average, ranging 500 - 6,000 words with an average of 3,000. As the name promises, BPI is replete with more than 26,000 photographs and portraits, and many entries offer additional images on a separate page. One can search by name, keyword in text, source, date of birth, profession, gender, place of origin, or ethnicity; it is unfortunate than one cannot limit to profiles with illustrations. Entry contents vary, depending on the source text; sources include familiar Wilson titles such as Current Biography, Chambers Biographical Dictionary, American Authors, Musicians since 1900, and World Film Directors. A defect noted in a recent review is the large proportion of entries drawn from reference works published before 1970.4 Most entries offer a link to additional information from some 4,000 popular periodicals, with selected full text from titles such as Time, People, and American Scholar. Although it lacks the broad scope of Biography Resource Center, BPI will satisfy most students seeking profiles of well-known persons, both contemporary and historical.

Oxford's new *American National Biography* (ANB) database is by definition narrower in scope than the Gale or Wil-

son titles, presenting almost 17,500 biographical essays on deceased persons "whose lives have shaped the nation." Ten years in the making, the 24-volume American National Biography aimed to completely rework and expand the classic Dictionary of American Biography, with profiles of more than 7,000 persons not covered in the earlier work and new essays on many who were. The online ANB offers 2,000 portraits and photographs not found in the printed version, and aims to enhance that work by adding new biographies of persons not previously profiled, as well as updating biographical essays and article bibliographies. The June 2000 update included 125 new or revised entries for persons as disparate as scientist Carl Sagan and distiller Jack Daniels. The essays are signed and can be searched by name, keyword in text, occupation, gender, birth or death date or range, birthplace, or contributor. The occupation or "realm of renown" search allows selection from one of 17 broad areas, such as "Sports and Games," or from a classified list of narrower subcategories, such as "Swimmers" or "Surfers." With a list of almost 200 specialists who served as editorial advisors and section editors and the backing of the American Council of Learned Societies, ANB clearly has more gravitas than most other entries in the biography database market, even if libraries may be reluctant to purchase an online subscription so soon after plunking down more than \$2000 for the print set. Oxford has recently announced a similar project to update the venerable Dictionary of National Biography and, though almost 40,000 of the anticipated 50,000 articles have been submitted to the editors thus far, we will have to wait until 2004 to glimpse New Dictionary of National Biography online

Directories and Catalogs

his publishing category seems most vulnerable to the Internet tsunami. What better use could be made of technology than opening up static A-Z or subject lists for access at multiple points and for output using customized

criteria? Indeed, this seems the one reference category where librarians have been willing to cancel print and CD-ROM subscriptions and throw themselves on the tempestuous mercies of the Web. With some types of publications, such as telephone or business listings, this strategy appears justified, but with others, such as association directories, the decision is much more difficult. Although a complete review of online directories requires a separate essay, following are some of the major offerings.

Telephone and E-mail Directories

Free telephone directories have proliferated on the Web, with family trees so complex, mutable, and confusing that untangling their relationships and lineage might discompose the most ardent genealogist. An excellent starting place is Telephone Directories on the Web, created by Robert Hoare, a computer and media consultant, in 1995. This site collects and organizes hundred of links to white and yellow pages, e-mail directories, and fax listings from all over the world. Links are organized in six broad regional areas (e.g., South and Central America, Africa) with further subdivisions by functionality (e.g., search for people by phone number; search for businesses by address). Hoare's annotations for most links provide helpful hints about special features or shortcomings of each site.

Most individual US directory pages offer data from AT&T and the Baby Bells (e.g., Anywho.com or 555-1212) or from vendors who specialize in compiling and selling marketing and directory data for businesses, such as competitors Acxiom (Axciom Home and Axciom Biz) and InfoUSA.com (previously known as American Business Information). These pages offer directory information free as a lure for more lucrative commercial services and as a guarantee of consumers for advertising revenue. Because most sites are compiled from overlapping and increasingly similar databases, users will want to evaluate them on the functionality of their search interface or the relative intrusiveness of their ads. Standard features on most sites include the ability to search by last name, city, state, zip code, or phone number for personal and business names, and by business category, address, city, state, and zip code for businesses (many require a state to be able to process the search). Most offer enhancements such as a reverse lookup for identifying businesses or people by phone number, a "distance locator" that will help identify all the establishments of a certain type within a specified range of miles, and maps. International coverage varies with each site's information partners; several offer Canadian, UK, and European links. To find numbers in a particular country or region, it is usually more expedient to begin with a gateway site such as Telephone Directories on the Web than to try following links from any of these individual US pages.

Given that much of Acxiom's data is available free on the Web, why would a library choose to subscribe to Acxiom Home (86.6 million records) or Acxiom Biz (16.5 million records) through OCLC's First-Search? The standard search interface, free from advertising clutter, is a selling point, as is the ability to conduct very broad (e.g., first name "Abby" in Austin) or very complex (zip codes or area codes combined with SIC codes) searches not available in most free services.

Several telephone directory sites also offer e-mail searches. It is often easiest to find an e-mail address for an academic colleague by navigating directly to the main Web page for his or her institution. But how does one locate an e-mail address without knowing an institutional affiliation or find a person associated with a particular e-mail address? Directories such as InfoSpace or Bigfoot concentrate on e-mail addresses drawn from the large commercial Internet service providers—e.g., MSN, Prodigy, Compuserve. In contrast, Internet Address Finder, claiming more than 6.7 million records, appears to offer a far larger file of e-mail addresses drawn from the .edu, .org, and .gov domains, together with the more common Hotmail and Yahoo! addresses. One can search by an individual's last name and limit that search by first name, organization or business, and domain name; a reverse lookup is also available. "Last update" information is provided for each record, a useful feature since so many addresses are out-of-date, as one can see from multiple records for the same individual. So far, no one e-mail directory provides the scope, completeness, and functionality one expects in a standard reference work.

Business Directories

An efficient search engine will quickly retrieve the main home page of a business concern, but business home pages vary so widely in content and design that users can wander for quite a while before identifying the basic company information expected in any good printed business directory. Yellow page services like those mentioned above or Verizon's *Superpages* (formerly *Big Book* and *Big Yellow*) can serve as business directories in a pinch, but their consumer focus tends to make separating the home office from branches and subsidiaries difficult and time-consuming.

For faster, more accurate searching, it is wise to turn to a specialized business directory. Fortunately for frugal searchers, several expensive business databases make a subset of their data available free. Hoover's Online, long a trusted name in business information, provides capsule information on more than 13,000 public and private, US and international businesses free, reserving in-depth analytical reports for subscribers. One can search by company name, ticker symbol, keyword, or corporate officers. Free capsule summaries provide directory information (including e-mail and a link to corporate Web pages); lists of subsidiaries; a paragraph of company history; basic sales, stock, and other financial data; a list of key competitors; links to current news stories; and top executives. CorpTech sells directories of hi-tech firms, but its database of 50,000 firms can be searched free by company name, ticker symbol, corporate executive, or product. Most entries include

basic directory information, sales, CEO name, and a brief description, with an option to purchase longer research profiles with a credit card. Although users must register, the Thomas Register of American Manufacturers database of almost 157,000 US and Canadian manufacturers is certainly easier to use than the printed green giants familiar to every business librarian. After registering, one can search by product or service, company name, or brand name; while most entries provide only brief address directory information, there are links to more than 7,700 online manufacturer catalogs. CEO Express functions as a member's Web portal to the world of business and finance but makes available free an astonishing amount of company data. A company name search in this database of more than 350,000 US and foreign businesses will retrieve profiles and research reports from the Wright Investor Service database, with address and contact information, recent stock prices and earnings, corporate officers, and links to SEC filings, annual reports, or trade association data. CEO Express also offers a search of two dozen US industry areas.

Extracting much in the way of free information from InfoUSA's page is more difficult. Although one can search the free directory service by company name, searches must also be limited to a specific state. Reference USA, infoUSA's subscription service, is worth investigating both for the custom search options (e.g., by SIC code, area or zip code, sales volume, number of employees) and for the sheer size of the database (more than 10 million US businesses) drawn from telephone directories and SEC filings. The Gale Business Resources package offers far more than a simple directory service and is priced accordingly. Compiling data from more than twenty Gale print series, this database allows searching through almost 500,000 US and international businesses by company or brand name, location (zip or area code, country, city, or state), and industry or SIC code. Students conducting research in greater depth will appreciate its inclusion of unique titles such as Market Share Reporter and International Directory of Company Histories.

Associations and Organizations

es, Virginia, you can find the home page for the American Dry Bean Board fairly quickly with a Web search. But, browse however you may among the recipes for dried legumes and paeans to their virtues, you will not find an address, a phone number, or any idea of the number of members or goals of this organization. And that, in a bean pod, is the difficulty of relying solely on the Web for association information. Gale Research was founded on the broad back of Encyclopedia of Associations almost 50 years ago; it is indispensable for locating and investigating national and international (more recently, regional) organizations by name or subject category. Its Web version, available either as a separate database, Associations Unlimited, or as part of Gale's Ready Reference Shelf collection, allows searching among almost 160,000 association entries by entirely new criteria—such as number of members, location, or names of officers—in addition to free text. The Associations Unlimited database offers more than 300,000 additional records from IRS data. Ready Reference Shelf is a bundled database that incorporates 15 Gale titles, including Directories in Print, Directory of Special Libraries and Information Centers, Research Centers Directory, International Research Centers Directory, and Government Research Centers Directory, in addition to the three Encyclopedia of Associations titles. The fullest records contain address and contact information, including URLs and e-mail contacts in many instances (though not for the Dry Bean Board), officers, founding date, number of members, and information about publications, awards, meetings; the skimpier records, which tend to come from the regional and state listings, offer only an address. Besides differences in content, there are some variations in interface between Ready Reference Shelf and Associations Unlimited, so libraries hoping to trade their print subscription for online will definitely want to try both titles. Format aside, Encyclopedia of Associations is essential to

more reference collections. Institutions that support research in international policy or development will in most cases already have a paper subscription to Yearbook of International Organizations, a complex title in four volumes with an organizational structure and alphabet soup of acronyms calculated to baffle most firsttime users. For about the same price as the printed version, the publisher (K.G. Saur, now part of Gale Group) is making a Web database available (Yearbook of International Organizations On-Line), with profiles and directory information for more than 44,000 international bodies and nongovernmental organizations.

Among other free organization directories on the Web, none can match the sheer size of the Gale title. The Internet Public Library's IPL Associations on the Net collects links to approximately 2,000 organizations, arranged by subject area. The American Society of Association Executives provides links to more than 6,500 primarily US trade and professional organizations on their Gateway to Associations page, where one can search by keyword in name, broad category, and location. While these two sites provide only links, Scholarly Societies Project (Univ. of Waterloo Library) has, since 1993, collected links to and information about more than 1,850 learned societies around the world. Useful features on this page include special categories, such as national academies or royal societies, and essays and bibliographies on the history of scholarly associations.

Searchers can locate brief directory information on more than 57,000 private philanthropies in the US through the Foundation Center's free service, Foundation Finder. Most records include contact and address information, type of foundation, assets and total giving in the last fiscal year, and, when available, links to current IRS filing documents. In contrast, the Center's subscription service, Foundation Directory Online, covers only 10,000 or so of the largest private giving organizations in the US, those with \$3 million or more in assets. For a price comparable to that of the printed version, one can search the online

database by additional criteria, such as fields of interest, types of support, or geographic focus. The full records provide information on giving practices, grant deadlines, and detailed financial data. Foundation Directory Online Plus includes a separate search through 100,000 grants for criteria such as recipients or states, counties, or cities where grants were made. Even for those institutions not supporting research in grants or higher education, campus development officers will want to know about this online resource.

Book and Journal Catalogs

Several recent articles⁵ have noted that the utility of e-tailer sites such as *Amazon.com*, *Barnes and* Noble.com or the American Bookseller's Association's new BookSense.com for reference work. In addition to being free of charge, an international catalog like Amazon.com may well have more up-to-date information on availability than a reference chestnut like Books in Print, which lists only North American imprints. Thumbnails of dust jackets are both appealing and informative (several libraries, taking a page from Amazon's book, have begun adding book jacket images to their online catalogs), reviews and review excerpts are increasingly drawn from authoritative publications such as Booklist or Kirkus Reviews, and suggestions and links to related titles are generally helpful, if sometimes a little too fuzzy. As noted above, author/title information from the Books in Print database is available, with some Choice reviews, on the free Britannica.com site.

So, why should libraries continue to subscribe to one of the many commercial interfaces to *Books in Print* (BIP)? One reason may be recent revelations about price manipulation and resale of customer demographic information by the large online bookstores, but perhaps more compelling for librarians is the difference in search functionality. Searching in *Amazon* or other free sites is generally limited to author, title, or broad subject keyword in the catalogs of online booksellers, though one can

usually force the system to search on exact ISBN. The recently redesigned BIP subscription service from Bowker offers many enhancements over previous iterations, or over versions available from other vendors. such as Ovid or OCLC's FirstSearch. The advanced search features permit searching by keyword or exact phrase in author, title, publisher, series title, and other fields, with limiting by book type, price range, year of publication, audience, or reviewing sources. Reviews are drawn from Choice, Library Journal, and Sci-Tech Book News. among others. Other features include 4,000 author biographies, a searchable awards database, 100 years of bestseller lists from Publisher's Weekly, and direct links to publishers' sites with information on stock availability. Still, library acquisitions departments tend to work directly from their vendor Web sites, and today's students have grown up with Amazon. It is difficult to say precisely who on a college campus is the target audience for Books in Print; at several times the cost of a print subscription, libraries will want to weigh online functionality of Books in Print carefully against the free information provided by bookseller sites.

Yes, Virginia, you can find the home page for the American Dry Bean Board fairly quickly with a Web search.

Much less expensive is another Bowker subscription service, Global Literary Market Place, which draws together the content of the printed Literary Market Place (LMP) and International Literary Market Place (ILMP). Here, one can search for more than 30,000 publishers, editors, translators, agents, vendors, awards, and industry services. Many listings include email or Web addresses, and users of the print LMP will appreciate the ability to combine keywords such as "mystery" and "agents." Some areas of this subscription site are free, such as the directory of small

presses and links to industry organizations. Although Bowker makes some of this same information available free on their industry portal *Bookwire*, subscribers to the print *LMP* and *ILMP* will definitely want to investigate the online version for its increased functionality and timeliness.

For international coverage of current periodical publications, nothing rivals Ulrich's International Periodicals Directory, which librarians have relied on for nearly 70 years. Lately, however, as the printed volumes have grown in heft and number and the typeface has shrunk, this essential resource has become more and more cumbersome to consult. While the CD-ROM version may have worked well in a serials department, it was never an ideal delivery mechanism for faculty or graduate students who might wish to know, for example, the editor of a particular journal or the titles of refereed publications in a particular field. The flexible searching of Ulrichsweb, however, make searching and browsing through 250,000 current and 55,000 ceased magazines, journals, and newsletters a snap, with a quick search by ISSN, title, subject, or keyword, and an advanced search screen offers fields such as circulation, country, document delivery options, and price. Records include information similar to the printed Ulrich's, such as the expected address and publication information along with titles of abstracting and indexing sources, as well as extras such as reviews from Magazines for Libraries. An anticipated redesign of the site in October 2000 will make some awkward features, such as limiting to refereed publications, a bit easier, and will add new search criteria, such as language of publication.

One could claim that *Ulrichsweb* is an easy purchase decision for all college libraries (especially if its reasonable price holds), but potential subscribers will want to investigate the new free competitor, *Pub-List*. With data for more than 150,000 international serials, *PubList* is a concern that offers end users access to document delivery vendors such as UnCover and Infotrieve. Both basic and advanced search-

es and browsing are available for fields such as title, ISSN, subject, publisher, country, or keyword in description. Records are presented in an attractive (but difficult to print) simulated Rolodex card, and contain address and contact information, formats, frequency, membership in the Copyright Clearance Center, and links to other titles with the same publisher or subject headings. PubList does not include prices; otherwise this is a high-quality source that should serve to keep the subscription Ulrich's on its toes. Covering only US periodicals, Mediafinder is a subscription service built on Oxbridge Communications' Standard Periodicals Directory. Subscribers can search the 90,000 listings by title, location, publication type, publisher, and other fields. Oxbridge makes a keyword search or subject category browse of Mediafinder available free, although this is something of a come-on, since the entries retrieved give only titles and brief descriptions.

None of these directories includes newspapers. Since 1880, Ayer's (recently disguised under other titles) has been the standard source for American newspapers; in its more recent incarnation as Gale Directory of Publications and Broadcast Media, radio and television stations and networks in the US and Canada are also covered. In its online incarnation, Gale Database of Publications and Broadcast Media, one can search the 63,000 entries by city, zip code, wattage, circulation, ad rates, or online availability.

Some competing options are free. The American Journalism Review's AJR NewsLink site provides more than 18,000 links to newspapers, magazines, and broadcasters around the world, arranged geographically. Editor & Publisher's Media Links page aims to include "all media with a Web presence" and its busy main page offers the ability to browse newspapers by geographic region, to search by media category, name, or city, and to view quick links to major US newspapers and other popular categories. Where NewsLink offers only links, Media Links includes directory and publication information (such as the availability on online archives) in some records.

jake is plain-Jane in appearance, with an awkward nom de Web ("Jointly Administered Knowledge Environment"). But beneath that mild-mannered exterior lies an exciting and powerful new tool for librarians and researchers. Designed by librarians at the Yale University School of Medicine, jake combines information from the titles lists of almost 200 indexing, abstracting, and full-text databases. One can search jake to identify where a specific journal (down to the issue level) might be indexed or appear in full text; the approximately 23,000 journal records also provide LC and Dewey class numbers, LC subject headings, and ISSN. Because jake is an open source project that aims to make "finding, managing, and linking online journals and journal articles easier," it goes beyond the directory function to provide downloadable MARC records for electronic journals for inclusion in library catalogs; a new initiative will provide article-level URLs when available. jake allows searching by abbreviation, though the index is far from complete ("JMB" is there for the Journal of Molecular Biology, but not "PW" for Publisher's Weekly).

All That JAS: Journal Abbreviation Sources attempts to identify journal abbreviation sources on the Web and arrange them by broad subject area. Creator Gerry McKiernan (Iowa State) has made a good start with this site but, because it offers links to several dozen resources all over the Web and not a single, integrated, alphabetical list of acronyms, it is not very handy for ready reference. Until it is available in Web form, the printed Periodical Title Abbreviations, by Leland Alkire (11th ed., 1997), should never be allowed to wander far from the reference desk.

Desiderata

hat resources do we lack to make electronic reference collections complete? There are many adequate directories of colleges and universities online, but one as authoritative as the American Council on Education's Accredited Institutions of Postsec-

ondary Education and its compendium American Universities and Colleges would be must welcome, as would UNESCO's World List of Universities or International Handbook of Universities. Europa promises that their incomparable World of Learning will be available on the Web soon, which will provide excellent international coverage for universities, learning societies, and libraries. For North American libraries, it would be wonderful if a free subset of American Library Directory were made available on the Bowker site and, as long as we are wishing, it would be handy if selected tables from Bowker Annual of Library and Book Trade Information could be included. As noted above, a comprehensive compendium of acronyms, such as Gale's Acronyms, Initialisms, and Abbreviations, Alkire's Periodical Title Abbreviations, or ITA: International Title Abbreviations would be very useful. Finally, the Web is clogged with netiquette advice, but one can find no one comprehensive Web source for proper manners, precedence, and forms of address. Though Bartleby.com offers both Roberts Rule of Order Revised (1915) and Emily Post's Etiquette in Society, in Business, in Politics and at Home (1922), it is doubtful that those works will answer queries about running net meetings or the use of cell phones in class.

Endnotes:

- W.G. Jordan, Literary Era, 8:52 (1901), quoted by Alice Kroeger in Guide to the Study and Use of Reference Books (Chicago: ALA, 1902).
- 2. Several recent articles have discussed the accuracy and efficiency of Web searches as opposed to traditional reference sources. See especially Joseph Janes and Charles R. McClure, "The Web as a Reference Tool: Comparisons with Traditional Sources," Public Libraries 38:1 (Jan/Feb 1999): 30-33; 36-39; Joseph R. Zumwalt and Robert W. Pasicznyuk, "The Internet and Reference Services: A Real-World Test of Internet Utility," RUSQ: Reference & User Services Quarterly 38:2 (1998): 165-72; Tschera Harkness Connell and Jennifer E. Tipple, "Testing the Accuracy of Information on the World Wide Web Using the Alta Vista Search Engine," RUSQ: Reference & User Services Quarterly 38:4 (Summer 1999): 360-

368; Chris Sherman, "Reference Resources on the Web," *Online* 24:1 (Jan-Feb 2000): 52-56; Diane K. Kovacs, "Building a Core Internet Reference Collection," *RUSQ: Reference & User Services Quarterly* 39:3 (Spring 2000): 233-239.

- 3. William Katz, Introduction to Reference Work, Volume 1: Basic Information Sources, 4th ed. (New York: McGraw-Hill, 1982), p. 214.
- 4. See the comparative review of Biography Resource Center and Wilson Biographies Plus Illustrated, by Marie Ellis, in Reference Books Bulletin/Booklist 96:5 (November 1, 1999): 552-556.
- 5. Jodie Mattos and Joseph Yue, "Saving Money by Using Online Bookstores," Computers in Libraries 20:5 (May 2000): 42-47; Peter Jacsó, "Be Savvy! Sometimes the Free Resources Are Better," Computers in Libraries 20:5 (May 2000): 56-8; RUSA Machine-Assisted Reference Section (MARS), "Best Free Reference Web Sites," RUSQ: Reference & User Services Quarterly 39:1 (Fall 1999): 29-32.

■ Works Cited

Note: All sites were reviewed in January 2001. Much may have changed while this article was in press. To paraphrase Heraclitus, you can't click on the same Web page twice.

Prices reflect the cost of an annual subscription.

Reference Gateways

~Free~

Internet Public Library Reference Center http://www.ipl.org/ref/

Librarians' Index to the Internet (CH, Sup'99) http://lii.org/

Refdesk.com http://www.refdesk.com

Research-It! http://www.iTools.com/research-it/

Omnibus Sites

~Free~

Bartleby.com: Great Books Online http://www.bartleby.com

Bibliomania http://www.bibliomania.com

Funkand Wagnalls.com http://FunkandWagnalls.com

xrefer (CH, Feb'01) http://www.xrefer.com

Almanacs

Chase's Calendar of Events http://www.chases.com

NTC / Contemporary Publishing Group

Price: \$49.95

Famous First Facts on WilsonWeb http://www.hwwilson.com

H. W. Wilson

Price: From \$150 - \$260, depending on number of simultaneous users.

World Almanac via Facts.com http://www.facts.com Facts on File News Service

Price: Based on enrollment and modules purchased. For the World Almanac alone, subscriptions begin at \$175 for less than 5,000 FTE; for the complete Reference Suite, subscriptions begin at \$1995 for less than 5,000 FTE.

~Free~

Infoplease: Online Dictionaries, Internet Encyclopedia, & Almanac Reference (CH, Sup'00)

http://www.infoplease.com

PBS-History

http://www.pbs.org/neighborhoods/history/

This Day in History via the History Channel http://www.historychannel.com

Today in History via the American Memory Project http://lcweb2.loc.gov/ammem/today/

Statistics

Statistical Abstracts from A Matter of Fact SilverPlatter; also available through OCLC's FirstSearch system

http://www.silverplatter.com/

Price: Based on number of simultaneous users, starting at approximately \$500 per year for a single user.

Statistical Universe

CIS

http://web.lexis-nexis.com/statuniv/ Price: Based on enrollment and negotiated by site.

~Free~

American Demographics
http://www.demographics.com/publications/ad/

Bureau of Labor Statistics (CH, Sup'97) http://stats.bls.gov/

CDC National Center for Health Statistics (CH, Sup'97) http://www.cdc.gov/nchswww/

CIA World Factbook (CH, Nov'98)

http://www.cia.gov/cia/publications/factbook/

FedStats (CH, Jan'98) http://www.fedstats.gov/

InfoNation (CH, Jan'98) http://www.un.org/Pubs/CyberSchoolBus/infonation/e_infonation.htm

National Agricultural Statistics Service http://www.usda.gov/nass/

National Center for Education Statistics (CH, Jul'98) http://nces.ed.gov/

Statistical Abstract of the United States http://www.census.gov:/statab/www/

United Nations Global Statistics http://www.un.org/Depts/unsd/global.htm

United States Historical Census Data Browser http://fisher.lib.Virginia.EDU/census

U.S. Census Bureau (CH, Sup'97) http://www.census.gov:/

U.S. Census Bureau: Statistical Agencies (International)

http://www.census.gov/main/www/stat_int.html

U.S. Dept. of Justice Bureau of Justice Statistics (CH, Mar'00)

http://www.ojp.usdoj.gov/bjs/

Encyclopedias

Access Science

http://www.accessscience.com

McGraw-Hill

Price: Based on enrollment, beginning at \$695

for under 500 FTE

Britannica Online http://www.cb.com/ Encyclopaedia Britannica

Price: Based on enrollment and depending on type of college or consortium, with an average price of \$0.40 per FTE for four-year institutions.

Encyclopedia Americana Online (CH, Oct'99) http://ea.grolier.com Grolier

Price: Based on enrollment; beginning at \$280 for under 300 FTE

~Free~

Africana.com http://www.africana.com

Britannica.com http://www.britannica.com

Columbia Encyclopedia via Bartleby.com http://www.bartleby.com/65/

 $\label{lem:compton} {\it Compton's Encyclopedia~Online~(CH, Sup'00)} \\ {\it http://www.comptons.com/encyclopedia}$

Encarta

http://www.encarta.com

Encyclopedia.com (CH, Oct'98) http://www.encyclopedia.com

Funk and Wagnall's Multimedia Encyclopedia http://FunkandWagnalls.com

Nupedia.com http://www.nupedia.com

Maps and Gazetteers

Columbia Gazetteer of the World Columbia University Press http://www.columbia.edu/cu/

http://www.columbia.edu/cu/cup/gazetteer/gaz.html

Forthcoming in 2001 Price: To be announced.

~Free~

About.com's Blank & Outline Maps http://geography.about.com/science/geography/ cs/blankoutlinemaps/index.htm

Atlapedia Online http://www.atlapedia.com

CIA World Factbook (CH, Nov'98) http://www.cia.gov/cia/publications/factbook

Color Landform Atlas of the United States (CH, Jul'00) http://fermi.jhuapl.edu/states/

Map Collections: 1544-1999 (Library of Congress)

http://lcweb2.loc.gov/ammem/gmdhtml/gmdhome.html

Maps.com

http://www.maps.com

MapQuest

http://www.mapquest.com

National Geographic's Map Machine http://www.nationalgeographic.com/ resources/ngo/maps

National Imagery and Mapping Agency GEOnet Names Server

http://164.214.2.59/gns/html/index.html

Topo Zone

http://www.topozone.com

U.S. Census Bureau TIGER Mapping Service http://tiger.census.gov/

USGS Geographic Names Information System http://mapping.usgs.gov/www/gnis

Dictionaries and Thesauri

Oxford English Dictionary Online
Oxford University Press
http://www.oed.com
Based on enrollment, with an average of \$0.40
per FTE, though significant consortial discounts
are available

~Free~

Acronym Finder http://www.acronymfinder.com/

American Heritage Dictionary of the English Language via Bartleby.com http://www.bartleby.com/61/

Brewer's Dictionary of Phrase and Fable via Bartleby.com http://www.bartleby.com/81/

Also available at Bibliomania: http://www.bibliomania.com

Cambridge Dictionaries Online http://dictionary.cambridge.org/

Dictionary.com http://www.dictionary.com

Encarta World English Dictionary http://dictionary.msn.com

Hutchinson's Dictionary of Difficult Words http://www.lineone.net/dictionaryof/difficultwords/

Merriam-Webster Online (CH, Apr'98) http://www.m-w.com

Onelook Dictionaries (CH, Sup'97) http://www.onelook.com

Random House Webster's College Dictionary via Funkand Wagnalls.com http://www.funkandwagnalls.com/dictionary/

Roget's 21st Century Thesaurus via Funkand Wagnalls.com http://www.funkandwagnalls.com/thesaurus/

Roget's II: The New Thesaurus via Bartleby.com http://www.bartleby.com/62/

Symbols.com (CH, Oct'98) http://www.symbols.com

Thesaurus.com http://www.thesaurus.com

Word Spy http://www.logophilia.com/WordSpy

Wordsmyth: The Educational Dictionary-Thesaurus http://www.wordsmyth.net

World Wide Web Acronym and Abbreviation Server (CH, Apr'98) http://www.ucc.ie/acronyms

Your Dictionary.com http://www.your dictionary.com

Quotations

Columbia Granger's World of Poetry Online
Columbia University Press
http://www.columbiagrangers.org/main.htm
Price: from \$445 to \$895 for academic campus
licenses; one-time discounts apply for libraries

Price: from \$445 to \$895 for academic campus licenses; one-time discounts apply for libraries that have recently purchased one of several Granger's print titles.

Roth Poem Finder Roth Publishing

http://www.poemfinder.com

Price: Ranges from \$600 for a single user in one building to unlimited users in one building for \$1350; additional buildings or sites can be added for an additional fee.

~Free~

Bartlett's Familiar Ouotations via Bartleby.com http://www.bartleby.com/99 and

http://www.bartleby.com/100

Cyber Nation's Quotation Center http://www.cvbernation.com/victory/ quotations/directory.html

Famous Quotations Network http://www.famous-quotations.com/

The Quotations Page (CH, Feb'98) http://www/quotationspage.com

Quoteland

http://www.quoteland.com

Simpson's Contemporary Quotations via Bartleby.com http://www.bartleby.com/63

Biography

American National Biography Oxford University Press http://www.anb.org

Price: Based on enrollment, with an average of .20 per FTE, though significant consortial discounts are available.

Biography and Genealogy Master Index (CH, Sep'98)

Gale Group

http://galenet.gale.com Price: Negotiated by site.

Biography Resource Center (CH, Nov'99)

Gale Group

http://galenet.gale.com Price: Negotiated by site.

Wilson Biographies Plus Illustrated

H. W. Wilson

http://www.hwwilson.com

Price: Based on enrollment and number of simultaneous users; prices for academic libraries begin at \$1495.

~Free~

Biographical Dictionary http://www.s9.com/biography

Biography.com (CH, Sup'97) http://biography.com

Literary Index

http://www.galenet.com/servlet/LitIndex

Lives, the Biography Resource (CH, Dec'99) http://amillionlives.com

New Dictionary of National Biography Oxford University Press Forthcoming in 2004 http://www.oup.co.uk/newdnb/

World Biographical Index (CH, Apr'99) http://www.saur-wbi.de

Telephone and E-mail Directories

Acxiom Home and Acxiom Biz http://www.oclc.org/firstsearch/ OCLC's FirstSearch

Price: Subscription based on number simultaneous users and enrollment; also available through a per-search option at about .62 a

~Free~

555-1212.com http://www.555-1212.com/

Anywho.com http://www.anywho.com

Biafoot

http://www.bigfoot.com/

http://home.infospace.com/

InfoUSA.com http://www.infousa.com/

Internet Address Finder http://www.iaf.net/

Telephone Directories on the Web http://www.teldir.com/

Business Directories

Gale Business Resources

Gale Group

http://galenet.gale.com Price: Negotiated by site.

Hoover's Online (CH, Sep'97)

Hoover's Inc.

http://www.hoovers.com

Price: Based on enrollment; there are currently three levels of subscriptions, from \$995 for schools under 4,000 FTE to \$3995 for schools over 10,000 FTE

Reference USA infoUSA

http://referenceusa.com

Price: Based on enrollment and type of access, starting at one computer and with just the business file for \$2000.

~Free~

CEO Express

http://www.ceoexpress.com

CorpTech Database of 50,000 High-Tech Companies

http://www.corptech.com

Hoover's Online (CH, Sep'97) http://www.hoovers.com Some portions passworded for subscribers only.

SuperPages.com

http://superpages.com

Thomas Register of American Manufacturers (CH, Jan'98)

http://thomasregister.com

Associations and Organizations

Associations Unlimited (CH, Oct'98)

Gale Group

http://www.gale.com Price: Negotiated by site

Foundation Directory Online and Foundation Directory Online Plus

Foundation Center

http://fconline.fdncenter.org

Price: Foundation Center Online starts at \$19.95 a month or \$195 per year for a single user; Foundation Center Online Plus starts at \$29.95 a month or \$295 per year.

Gale's Ready Reference Shelf (CH, Oct'98)

Gale Group

http://www.gale.com Price: Negotiated by site

Yearbook of International Organizations On-line

K.G. Saur / Union of International Associations

http://www.uia.org/organizations Price: Single user 1,980DM

~Free~

American Society of Association Executives: Gateway to Associations Online Search Directory of Association Web Sites http://info.asaenet.org/gateway/ OnlineAssocSlist.html

Foundation Finder http://lnp.fdncenter.org/finder.html

IPL Associations on the Net http://www.ipl.org/ref/AON/

Scholarly Societies Project (CH, Feb'99) http://www.lib.uwaterloo.ca/society/ overview.html

Book and Journal Catalogs

Books in Print Plus with Reviews / Books in Print R.R. Bowker; also available on OCLC's FirstSearch system, through Ovid, SilverPlatter, Dialog, and other online vendors.

http://booksinprint.com

Price: Begins at \$1995 with reviews for a single user; without reviews the pricing begins at \$1850 single user.

Gale Database of Publications and Broadcast Media (CH, Oct'98)

(also available as a component of Gale's Ready Reference Shelf).

Gale Group

http://galenet.gale.com Price: Negotiated by site.

Global Literary Market Place (CH, Feb'99)

R.R. Bowker

http://www.litererymarketplace.com Price: begins at \$389 for a single user.

Mediafinder

Oxbridge Communications, Inc. http://www.mediafinder.com Price: \$995 for a single user.

Ulrichsweb

R.R. Bowker, also available though Ovid, SilverPlatter, Dialog, and other online vendors. http://www.ulrichsweb.com
Price: Begins at \$895 for a single user.

~Free~

AJR NewsLink (CH, Jan'99) http://ajr.newslink.org

All That JAS: Journal Abbreviation Sources http://www.public.iastate.edu/~CYBERSTAC KS/JAS.htm

Amazon.com http://amazon.com

Barnes and Noble.com http://www.bn.com

BookSense.com http://www.booksense.com BookWire
http://www.bookwire.com

Editor & Publisher's Media Links http://emedial.mediainfo.com/

jake

http://jake.med.yale.edu/

PubList (CH, Dec'98) http://www.publist.com

■ Correction

Our review of *Critical Essays on E.L. Doctorow*, ed. by Ben Siegel (Jan'01, #38-2590), contained a misprint. In fact, many titles in G.K. Hall's "Critical Essays" series include original essays. We apologize for the error.

■ Letter

To the Editor:

Concerning the review of my book "A" Western Filmmakers: A Biographical Dictionary of Writers, Directors, Cinematographers, Composers, Actors, and Actresses (Jul'00, #37-5991), I believe the reviewer has misunderstood my intentions in some respects.

- (1) "A" in the title should not confuse anyone interested in westerns; the A/B distinction has been used for many years.
- (2) I divided performers into "leading men," "leading ladies," "supporting actors," and "supporting actresses" to give readers an idea of numerical proportions across capacities and to allow readers to compare and rank performers in each capacity.
- (3) I mention major films in all genres in the first section of each entry to draw a general picture of a performer. Listing all movies at the end would be redundant. One of my goals was to extract "A" westerns from available filmographies; the listing under each entry is where readers will find my "A" westerns.
- (4) I used the notion of "quasi-western" because large numbers of films are considered westerns by some but excluded by others.
- (5) These issues as well as period of coverage ("the book encompasses the entire twentieth century") are explained in the preface.

Sincerely, Henryk Hoffmann