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Volume 30, numéro 1, octobre 2001

URI : <https://id.erudit.org/iderudit/1015942ar>

DOI : <https://doi.org/10.7202/1015942ar>

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Éditeur(s)

Urban History Review / Revue d'histoire urbaine

ISSN

0703-0428 (imprimé)

1918-5138 (numérique)

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Citer cet article

McShane, C. (2001). Surf City: A Guide to the Web for Urban Historians. *Urban History Review / Revue d'histoire urbaine*, 30(1), 56–66.
<https://doi.org/10.7202/1015942ar>

Surf City: A Guide to the Web for Urban Historians

Clay McShane

The World Wide Web is useful for the scholarly needs of urban historians. Not only can it present information in the traditional print format, but it can also provide information in the visual form that urban scholars are usually concerned with. Writing about social geography, contested public spaces, the material culture of the inarticulate, physical planning, and environmental injustice without iconographic materials is difficult. For this the web is ideally suited. Indeed, it adds three new weapons to our traditional arsenal. The web can display moving images, provide sound, and enable hyperlinks to related materials—all options unavailable in print. With the appearance of the peer-reviewed electronic publications, Maria Balshaw, Anna Notaro, Liam Kennedy, and Douglas Tallack, eds., *City Sites: Multimedia Essays on New York and Chicago, 1870s–1930*¹ and Philip Ethington, “Los Angeles and the Problem of Urban Historical Knowledge,”² the world wide web has moved firmly into the realm of publishing respectability with formatting appropriate to the new medium.

The web has also made a range of research materials much more accessible. At this point its best use is for building bibliography. However, there are valuable collections of scanned texts on line, limited in scope to be sure, but with the great advantage of being word-searchable. Not much historical material has been scanned yet, but this will change over time. In principle this seems to me to be little different from the microfilm collections that already exist.

Right now the most important research materials on the web are photo collections and databases. The extremely rich iconography is better indexed and certainly more easily examined and manipulated than in the original archive. In at least one important case, there are images available on line that no longer exist in real space. The web also allows much easier access to governmental databases, e.g., the U.S. Census, although relatively little time-series data is available on line.

More commonly, urban scholars have created web sites covering their own cities, mostly for the public or students. Such general scholarship is functionally akin to writing textbooks, which are not peer-reviewed. Devalued as this work may be by our colleagues, it is an important part of the service functions that university administrations, especially at big city universities, expect. Almost without exception, urban historians are already drawn into the history of their localities, even when most of the scholarship focuses on general topics or other cities. One thinks here of Ken Jackson gradually moving toward becoming a New York City historian or Joel Tarr’s work on Pittsburgh. In a sense, both are local historians, although describing them that way misses the importance of their work. These local sites often contain valuable information, especially historical photos and timelines.

There are some general web issues that I do not want to discuss at great length, but are worth noting. There is a tendency to see the web as a tangle of problems especially by the kinds of technophobes and traditionalists that are often found in history departments. In a widely publicized book,³ Nicholson Baker points out that original paper documents may be destroyed or warehoused inaccessibly by librarians after reproduction, a legitimate concern, but one little different from issues about microfilm. Scanned works are certainly more accessible than an

archive 5,000 miles from home. Word searching of scanned material facilitates research, especially on elusive topics where one or two items are buried in thousands of unindexed text. I do worry about the originals disappearing, but this would hardly be a reason to stop scanning, any more than it has stopped microfilming. ProQuest, the corporate successor to Bell and Howell, has announced plans to digitize the historical collection of microfilmed newspapers that it already sells to libraries, including the *New York Times*. Scanned newspapers are a huge improvement over microfilm and, in some ways, over the original printing, because they can be word searched. To be sure, they will have all the problems of current microfilms: usually only one edition is copied, some sets don’t copy advertising or “fluff” Sunday sections, and minimum-wage copying staff sometimes miss or duplicate pages.

The web does increase the possibility of plagiarism (by students and, sad to say, colleagues). Students especially have a hard time distinguishing between good and bad web sites. It is not clear to me how this is different from the current state of affairs. Web plagiarism is much more easily detected than let us say copying a 1949 M.A. thesis at the University of Alaska. Quality evaluation is harder on the web. Students usually rely on “good” books because they do research at a university library that has gatekeepers watching what goes into the collection. They can, and should, be taught to be more discriminating on the web.

As currently constructed the web has an odd combination of strength and weaknesses for research. It is American-centric, although that is rapidly changing. It privileges the statistical and visual over the documentary. Almost everything is searchable, both internally and externally, but there are serious search limitations and those limitations are not always transparent. Libraries and other content providers rarely mention what they’ve omitted. Also standard search engines can give so many hits as to be useless. For example, looking for Richard Harris (former editor of this periodical) on Google—probably the best search engine—drew over 600,000 hits. Even Clay McShane, a far less common name, drew 2260 hits, most of them irrelevant. However, Google also has an advanced search function. Searching under “geography,” limiting the search to sites that have the exact phrase “Richard Harris,” excluding sites with the word “actor” (usually genealogy is a better word to eliminate, since genealogists love the web) and confining the domain to “edu,” gets it down to 1800 hits. Google expects to put a search function on line soon that will allow even more accuracy.

Finally I should note that, this essay is likely to seem American-centric. I’m an Americanist by training and close to a monoglot. I have sought contributions, mostly without success, in a number of other countries.⁴ Much of this work derives from editing a webography for H-Urban.⁵ The “drop dead” point for this essay was June 6, 2001, an eon ago in cyberspace. Undoubtedly two dozen new urban sites have gone on line since then. Probably ten percent of the sites cited here have changed their URLs before publication. If the URL does not work, search by title with a search engine.

Research

At this point in its evolution, the Internet helps most in building bibliographies, the first step in any research process. The OCLC web site, available as a subscription service in most university libraries, is the backbone of interlibrary loan services. It accesses the catalogs of virtually every university, public, association, commercial, or governmental library in the U.S., more than 24,000. Strange juxtapositions show its depth: it lists as members the Library of the General Conference of the Seventh Day Adventist Church next to the U.S. Army Medical Research Institute for Chemical Defense. Coverage outside the U.S. is less broad, but still includes 227 Canadian, 152 French, 38 Japanese, 247 British, 110 Australian, and 60 Mexican libraries. The great limitation of this resource—and electronic catalogs in general—is that large, older portions of some university library collections may be missing and it is not always clear what is missing from the electronic catalog. At my own institution most librarians insist that all holdings are in the electronic catalog, but there are over a thousand volumes on the old Cutter indexing system stashed in the basement that have never found their way into the electronic catalog. Most university libraries opened their electronic catalogs in the early 1970s. Prior coverage may not always be reliable. This caution notwithstanding, we have access to a massive amount of information about books that we did have ten years ago—without leaving our desks. Certainly we have more information about doctoral dissertations and especially M.A. theses. The enormous redundancy of having the catalogs of so many libraries in the system minimizes the risk of missing something.

In Canada, the National Library of Canada⁶ performs a similar function offering 22 million entries from 500 libraries. It has the added benefit of French language searches.

The starting point for urban history bibliography is Gilbert Stelter, *The Urban Past: An International Urban History*.⁷ For specifically urban works, the Urban History Association now puts its much-valued annual bibliographies on line.⁸ These can be found in copies of the Association's *Newsletters*, which must be downloaded in an Adobe format. However, only the last three years are available on line. There is wide coverage for North America and Europe and the Association is always looking for new bibliographers to help with uncovered areas of the world.

The best locator for manuscripts, articles, and dissertations is another subscription service, *Historical Abstracts* (including the purely Canadian/American section, *America History and Life*), which abstracts over 2000 journals in English, even if written in another tongue. The site is updated monthly and has covered major journals since 1954. Most university libraries subscribe to services like Ingenta and Lexis-Nexis for current articles from a broad array of publications, but not many that are specifically urban or historical. To make sure that a bibliography is completely current, researchers can check chapters.indigo.ca (Canada) and Amazon.com (USA). Amazon also has affiliates in France, Germany, Great Britain, and Japan. The on-line bookstore often includes tables of contents, publishers' descriptions, and lists of books whose publication has been announced, but not yet issued. Amazon has other features. Sometimes I've found interest-

ing connections by using the "readers who bought this also bought . . ." link. Readers can also subscribe to a service that sends an e-mail when a new book on a particular subject arrives, e.g., urban history. Some university libraries offer a similar service. (It is depressing to discover 494,000 works sold more copies than my last book.)

Terry Abraham at the University of Idaho has created what I believe to be the most extensive set of links to libraries with archival and special collections⁹ at [text missing here] If you are looking for resources on a particular locality, his site has more links to local collections than the Library of Congress' *National Union Catalog of Manuscript Collections*.¹⁰ Moreover Abraham covers the world, not just the U.S. For contemporary developments, the *Ultimate Collection of Newspaper Links*,¹¹ connects the web sites of newspapers in almost every city in the world—for example, four newspapers in Bridgeton, Barbados and three in Saigon, Vietnam. Some papers have extensive on-line archives, some none.

For Canadian urban history, good places to begin are Culturenet,¹² which links Canadian cultural institutions, and the University of Saskatchewan Archives,¹³ with links to 59 local archives (I can't tell if the missing communities are simply omitted or they don't have sites).

H-Urban offers the most important qualitative resource. This edited discussion group, founded in 1993 by Dr. Wendy Plotkin, has over 2,000 subscribers and a web site that gets more than 5,000 hits a month.¹⁴ Searching the logs by keyword will likely turn up scholarly discussions of key urban topics. Not to be overlooked are hundreds of professionally prepared book reviews produced and published for H-Urban and currently edited by Roger Biles of East Carolina University. Here the advantages of the Internet's speed are most obvious. Traditional journals are often so backlogged that reviews appear after a book has gone out of print. H-Urban reviews often appear within ninety days of publication. They are archived in a word searchable format and are easy to download. The site also contains a few bibliographical essays—for example, Carl Abbot wrote one on Washington D.C.¹⁵ and Joel Tarr with Jeff Stine¹⁶ wrote on urbanization and the environment. The web site has a large annotated webography, with links to over 150 urban sites. There is also a syllabus collection, which is worth a look, since many of the syllabi are for particular cities or topics and contain very detailed bibliographies. Also posting a research inquiry can help tremendously when starting a new project, since it helps one to learn what other people are doing and lets them know what you're working on. The last time I posted such an inquiry it drew over twenty responses from scholars, many of them pointing out resources in their locality that I would not have found otherwise. H-Urban is the oldest of the H-Net collection of over 120 scholarly lists. It is both easy and useful to look at the other lists, since all of them are archived in one place. There are some glitches with H-Net. Not all reviews appear in the review section, for example. So, searching all the lists for a particular author or title is a better way to find a review. The quality of editing can vary widely from list to list as well. Not everyone maintains the high editorial standard set by Plotkin.

Other important locations for links include the *Geography Department, King's College, University of London*¹⁷ which has a very large list of geography web sites and information providers, and the *Kansas List of History Websites*.¹⁸ Neither is specifically urban in focus, but both frequently list valuable sites. *The Public History Resource Center*¹⁹ "seeks to curate the field of public history, particularly as exercised on the web, by providing a structure of information which contextualizes and supports public history's recent invigoration." It includes information on the field of public history, provides links, and presents an excellent methodology for web reviews that complements the full-length reviews published there. Some readers may be especially interested in their *Reviews of World's Fair Websites*.²⁰

Four specialized web sites with excellent bibliographies are also worth noting. The Society of Architectural Historians²¹ offers a comprehensive list of works, including dissertations underway in architectural history. The site also has a collection of links and short biographies of virtually every important U.S. architect and planner. Distinguished urban transportation historian Martha Bianco, a professor at Portland State, has assembled The Urban Transportation Resource List,²² which contains a comprehensive American bibliography, including current transportation policy works and a list of web sites, as well as numerous databases. American Studies, Serial Bibliography Project, Urban and Planning History,²³ at the University of Maryland has an annotated bibliography of journals in urban and planning history. *The Institute of Urban History, University of Stockholm*,²⁴ contains both a bibliography and a list of publications, including some historical statistics.

Text Collections

The libraries at Cornell and Michigan are digitizing all their holdings from roughly 1800 to 1920, at the *Making of America Collection (MOA)*.²⁵ At present about 8,467 books with 2.8 million pages and 50,000 periodical articles are included. All of this text can be searched by word or a combinations of words. Anyone working in that time period will find the collection useful. The possibilities are endless. For example, my colleague Joel Tarr discovered that *MOA* included the complete city council proceedings for Detroit and several other large cities in Michigan. In less than half an hour, and without leaving his desk, he was able to find every regulation dealing with the construction and location of stables in those cities before 1925, a search that once would have required a trip to Michigan and at least a full day poring over the printed, unindexed proceedings in a dusty archive. The collection has one great weakness—there is no meaningful statement about what is included to date and what is not.

Famous planning historian John Repts at Cornell University has webbed "Urban Planning, 1794–1918: An International Anthology of Articles, Conference Papers, and Reports,"²⁶ an annotated collection of over 1,865 documents last updated May, 2000. The collection, composed of planning reports and prescriptive literature focused on the U.S. and Western Europe, also offers word searchability. However, there are some hard-to-explain gaps. Notably there is not a single work by Daniel Burn-

ham. Still, very few libraries have a collection as good as this one and none has a collection that is word-searchable.

There is also an excellent on-line collection of texts (and images and maps) of medieval English cities on line at *Medieval English Towns*.²⁷ I just don't know the field well enough to judge how representative or complete the collection is. Certainly its breadth is impressive and there is a large set of links.

There are also examples of inadequate ways to present such collections. American Memory at the Library of Congress has put up several documentary collections on specialized topics. I looked at *The Capital and the Bay*,²⁸ because it seemed to contain much material on Baltimore. The collection was a major disappointment—it ran largely to the popular, even ephemeral, at the expense of substance. The texts include travellers' descriptions of the city, selected reminiscences, and even some bad popular songs. There is no indication that the Library holds other Baltimore materials, yet a look at its electronic catalog shows a large holding of city records, including the Common Council Minutes, Board of Health Reports, and Police Department Reports. All these hold great interest to scholars concerned with urban governance, disease, and crime, especially if word searchable and if the statistics can be downloaded into a spreadsheet. There seems to be a general problem with the Library of Congress since it spends enormous (and valuable) effort getting its images—both still and moving—on line, but ignores its print collection, much of which is rapidly deteriorating and much seems to be lost. On my last two trips to the Library, deck attendants could barely find 60% of the books that I requested.

The potential problem with document collections is that they may become canonical. It is just too easy to scan a desktop collection and avoid actual archival work. Ideally, individuals would be able to scan other works and add to them to the collection, but this would require an editor, such as a planning librarian, to screen entries. Well-constructed collections could at least be partially self-supporting by selling their product to libraries. There would also seem to be potential for commercialization, with the revenue funding a permanent editor. The process is akin to the large, annotated print collections, often funded by the National Endowment for the Humanities, like the Adams papers whose selection, editing, and annotation is underway at the Massachusetts Historical Society. The key advantage of the web is the ability to search, add, and correct on a continuous basis. Some local sites described below also contain much text material. Increasingly, libraries will need to make hard choices between electronic, microfilm, and print sources.

Databases

I would argue that the greatest contribution of the web to urban scholarship so far has been on-line databases, which are almost always downloadable into a spreadsheet for further manipulation. The U.S. Census Bureau²⁹ now has posted summary data from the 2000 Census. Campbell J. Gibson and Emily Lennon of the U.S. Census Bureau, *Population of the 100 Largest Cities in the United States: 1790 to 1990*,³⁰ includes density figures and a discussion of sources. Also important is *Historical*

Census Statistics on the Foreign-born Population of the United States: 1850–1990.³¹ As of today (8 June 2001) neither site had incorporated the 2000 data. The Census Bureau data can be supplemented at SUNY-Albany's *Lewis Mumford Center*³² which presents large amounts of data on race and ethnicity, including indices of segregation, mostly from the 1990 and 2000 Census. Rutgers' *The State of the Nation's Cities: A Comprehensive Database on American Cities and Suburbs*³³ provides over 3,000 variables, some as far back as 1980. The general entry into U.S. government archives, which include print as well as database information from other agencies, is *The National Archives*.³⁴

*The Resource Centre for Access to Data on Europe*³⁵ links to numerous national databases, which vary widely in their historical and urban content. Also valuable for European data is CESSDA (Council of European Social Science Data Archives).³⁶ *CELADE (the Latin American and Caribbean Demographic Center)*,³⁷ has microdata on line going back as far as 1957. John Reys reports that statistical material, including urban information, can be found at *Educational Resources from Statistics Canada*³⁸ or "E-STAT under "Education Resources," which includes material from the early censuses of Canada, 1665–1871, as they appeared in printed form in the first 50 pages of the 1871 census. This site has a way to go before really useful material is available.

For a larger listing of national data sites in Europe go to *H-Urban*.³⁹ The *University of Minnesota Population Center*⁴⁰ has the best collection of links to population databases all over the world.

There are at least two specialized local sites of great value. Air pollution data for California and its cities back to 1980 can be found at, and downloaded from, *California Air Quality Data*.⁴¹ *The Living City/NYC*,⁴² put together by David Rosner and Amy Fairchild of Columbia University's new program in history of public health, covers public health in New York City from 1865 to 1920. The site is still a work-in-progress, useful now, and likely to be of extraordinary value when complete. The site digitizes the *Annual Reports of the New York City Board of Health* for most of the period indicated, as well as some major reports from other agencies. When searched, the documents automatically download as Adobe Acrobat PDF documents. The site is also visually rich with over a thousand images copied from popular periodicals. All the documents and images are searchable by title and subject. For pedagogical purposes, the site contains a timeline of major events, two on-line slide shows, and introductory essays by Rosner, Gretchen Condran, and Elizabeth Blackmar. Ultimately data will be downloadable from the *Reports* into a spreadsheet. Similar data exists at *Monuments and Dust: The Culture of Victorian London*.⁴³

City directories are obvious candidates for digitization, given the web's search ability. There is a large commercial program (target market: genealogists) underway by Primary Source Media⁴⁴ to digitize some of the directories of 99 different cities, and a few samples from 1859 are available on line. The best locally created collection, Toronto's Central Reference Library,⁴⁵ is now complete from 1833 through roughly 1880. An H-Urban posting

by Wendy Plotkin elaborates on the contents and utility of this site.⁴⁶ If other public libraries undertook similar projects, they could be extremely powerful resources.

Iconography and Maps

The world wide web works extremely well in presenting images and the urban collections that are already very rich. There are large national or state collections, especially for architecture and planning, and local collections (see below) of great utility to urbanists. A word of caution here: check the status of an image before you download. There are often issues of copyright and also of ownership.

The most unique of sites, @149th St.,⁴⁷ documents the history of graffiti on the New York City subway since roughly 1970. Its importance lies in the fact, as one of the authors points out, that it "documents works of art that no longer exist." The site shows work from over 180 artists analyzed by date, artistic school, and geography in a fascinating essay, written in a style best described as high art history. There is an excellent, but less analytic (and not surprisingly less comprehensive) site, *Art Crimes: The Writing on the Wall*⁴⁸ which presents contemporary examples from over 200 cities around the globe, including some very rare, and, I would guess short-lived, images from the notoriously clean Washington, D.C. Metro. Together these sites show the unique power of the web for presentation of visual information, for instant recall, and for universality. Some may question the issue of selectivity. How do we know what is included in these sites and what is not? It is not usually clear in either case, but the same is true of most real world iconographic repositories already. We rarely know the extent to which what has been saved reflects what existed.

The single most important site for images is the Library of Congress' *American Memory Collection*.⁴⁹ The site contains over 80,000 images. Major components of the collection, including two collections of mostly architectural photography, are urban. Perhaps the most valuable element of the collection for an urban social historian is the photo morgue of a Detroit newspaper from roughly 1890 to roughly 1930, since it documents people, not just buildings. The site also contains photos and drawings of all the buildings in the Historic American Buildings Survey and the Historic American Engineering Survey. There is a large collection of bird's-eye views, both lithographic and photographic, of numerous cities. The famous Office of War Information collection documenting home life during World War II is also here as are Matthew Brady's Civil War photos, many of them set in Washington itself. Some of Thomas Edison's early short films were street views in cities (not all American), sometimes taken by a camera attached to a trolley. These are downloadable and contain information available no other way.

The entire *American Memory* collection is remarkably well cross-indexed. To give some examples; searches led to the following number of hits: Atlanta–331, Boston–2067, Bronx–467, Detroit–5000+, Kiev–2, Las Vegas–74, Mexico City–134, Paris–32, Portland, Oregon–212, Terre Haute–11, Timbuktu–0, Toronto–23, Youngstown, and Ohio–162. I found one classic

problem. The word "Tokyo" drew 33 hits. However, all but three were photos of Los Angeles' Little Tokyo neighbourhood.

The big problem at *American Memory* is that the collection has outrun the too-simple search function, so that almost any search brings up far too many hits. Full Boolean search capabilities would help, as would the ability to limit searches by date. The photos are easy to download and reproductions are inexpensive. Almost all of the photos are copyright clear.

Several state-level collections are also very rich in urban materials. The *California Heritage Collection*⁵⁰ accesses 28,000 downloadable images and other archival materials, from San Francisco, Los Angeles, and other cities. Access is fast and easy. The *Minnesota Historical Resources Database*⁵¹ has over 75,000 images, many urban, all thumbnail and searchable. However, the search function is a trifle slow. The images are clear and ordering is easy and cheap.

*Ad Access*⁵² contains 7,000 advertising images for the years 1911 to 1950, mostly from the J. Walter Thompson collection at Duke University, all thumbnail and searchable. While not specifically urban, this archive captures—directly through ads for urban businesses, and indirectly through backgrounds—cities not as they were but as advertisers fantasized them. Duke's Special Collections Library also offers *The Urban Landscape*,⁵³ a set of a thousand digitized images of cities, mainly in the American south with lots of postcard views. Postcards add a new dimension to web iconography for the pre-1960 period, since they are in colour. Caution is required since postcard companies were masters of air-brushing, cropping and colourizing.⁵⁴ Like a colourized movie, postcards can leave the illusion of a pastel world, which is weird, but perhaps more accurate than a black-and-white world. In any case, doctored images capture something that is much harder to figure out than reality: the way people wanted things to look. Fantasies about spaces are often more interesting than their reality.

Both the *New York Public Library (NYPL)*⁵⁵ and the *Boston Public Library*⁵⁶ have very large, first-rate collections of images. The NYPL site has more than just local appeal, with some of the most famous urban photography ever taken, including thousands of photos from *Small Town America: Stereoscopic Views from the Robert Dennis Collection*, *Images of African Americans from the 19th Century*, Berenice Abbott, *Changing New York, 1935–1938*, Lewis Wickes Hine, *Construction of the Empire State Building, 1930–1931*, and Lewis Wickes Hine, *Work Portraits, 1920–1939*.

Architectural and planning historians have also put a number of photo collections on the web, usually contemporary photos of historic buildings. The starting point is the *Society for Architectural Historians*,⁵⁷ which has an image exchange with iconography of cities and their buildings from Ur to La Jolla and the best available set of links to other collections. *Architecture Week's Great Buildings Collection*⁵⁸ documents a thousand buildings and hundreds of leading architects, with 3D models, photographic images, architectural drawings, commentaries, and bibliographies. Either site will link viewers to a large number of collections tied to university courses and to various localities.

Many cities have local web sites, often tied to university courses on local architectural history or to preservation groups. An especially good example—in large part because it focuses on a time period for which other collections are often weak and because it has a systematic nature—is ADHEMAR, Base de données de la Groupe de recherche sur Montréal. Propriété, bâti et population Montréal, 1642–1805.⁵⁹ This site contains the important database of the Montreal Research Group at the Canadian Centre for Architecture, which produced a systematic social history of the built environment in Montreal from its foundation in 1642 through the early years of the 19th century. The site offers information pertaining to grounds, buildings or persons for a selected year or a whole period and has powerful search capacities and makes it possible to do some research on the territory of Montreal in the 17th and 18th centuries. Today, this territory corresponds to the historic district of Old Montreal. Although the site is mostly in French, there is an English description of the project underlying the database.

Finding historical urban maps on the Internet is surprisingly difficult, despite the enormous potential of the web for such a visual discipline. The only specifically urban set of maps seems to be U.S. Historical City Maps: The Perry-Castañeda Library Map Collection (University of Texas at Austin)⁶⁰ Many, but not all of its maps are from the U.S. Geological Survey and the early twentieth-century *Automobile Blue Books* of the American Automobile Association. Of course local collections also contain maps, but rarely historical ones.

Association of Canadian Map Libraries and Archives (ACMLA) offers a good set of links and purchasable samples of bird's eye views of cities and maps.⁶¹ The British Cartographic Society also has a large set of links at its web site.⁶² Unfortunately, neither seems very urban (I could not find the location of fire insurance maps on either) and both sites seem commercial.

Newly prepared maps accompanying historical web sites have deployed powerful new techniques. Many adopt the common hypertext technique of showing images of a building or a site on a map. Clicking the image brings up information on that subject, usually a photo. *The Preservation Map of Europe*,⁶³ organized by the European Commission on Preservation and Access, puts together a set of links to public and private preservation organizations everywhere on the continent. The best starting point on preservation in the U.S. is the National Register of Historic Places.⁶⁴ A number of state and local groups also have preservation sites. The most unique is *The Virginia Historical Inventory (VHI)*,⁶⁵ created by the Library of Virginia's Digital Library Program (DLP), which puts on line a 1930s Works Progress Administration (WPA) survey of historic buildings in Virginia, which reported on and often photographed more than 19,300 historic sites in the state. Many of the buildings covered, especially in rapidly suburbanizing Northern Virginia, no longer survive. The VHI includes more than 6,200 photographs, as well as 103 annotated county and city maps. The maps—unfortunately without Arlington County or Richmond—are uniquely referenced. For example, a map of the City of Norfolk numbers about 100 locations. Clicking on the highlighted numbers on the map will produce the name, report, and sometimes photographs of a his-

toric site. Perhaps because of the site's size, searches are very sluggish. Because the reports are photographed and not digitized, access can be clumsy.

The Library of Congress promised to digitize its huge collection of Sanborn Fire Insurance Maps in 1997, but none have appeared.⁶⁶ The only examples of insurance maps located on the web, are at the *Chicago Imagebase*,⁶⁷ which has a sensational collection of maps for that city, both historical and contemporary. At least two different sites will sell digitized Sanborns to individuals or libraries. Environmental Data Resources, heirs to the old Sanborn Company, offers 1.2 million maps, including more recent aerial views. A somewhat smaller collection (only 660,000 maps) is available from Bell and Howell.

Temporal mapping may be the most powerful technique for historians. This involves flipping through a time series of maps, usually with animation software, presented in file formats such as mpeg. The result looks roughly like time-lapse photography. The U.S. Geological Survey's *Temporal Urban Mapping Site*⁶⁸ has temporal maps illustrating the spread of human populations in the Baltimore/Washington and San Francisco areas, which are effective presentations of urban sprawl. The site is full of technical information and has historical street maps of Baltimore, Washington, D.C. and various cities in the Bay area.

The most advanced mapping techniques that I have encountered are at *Aquae Urbis Romae: The Waters of the City of Rome*,⁶⁹ designed by Katherine Wentworth Rinne, which contains interactive maps. Readers can set the topographical type (including rotating, moving images) then add or subtract different elements of the man-made water systems—such as aqueducts, sewers, and fountains—and change natural elements such as rivers, creeks, and marshes, and pick any of six intervals from 773 B.C.E. to the age of Caesar. The site has copies of inscriptions, a bibliography, and a badly working photo essay. A site like this for some hydraulically interesting modern city, such as Venice or Amsterdam or Chicago would be valuable.

There are other sites of interest to the water/sewer scholar. *Down the Drain: History of an Urban Infrastructure*⁷⁰ is the Chicago Public Library's history of water and sewer systems in that city with many photos. *A Glimpse into London's Early Sewers*⁷¹ is a journalistic narrative with some illustrations written by Mary Gayman for *Cleanser Magazine*.

Several web sites attempt to do the functional equivalent of oral history by asking hitters to send in reminiscences of important events. Probably the best known of these is *The Blackout History Project*,⁷² an innovative attempt to gather the reminiscences of survivors of the 1965 and 1975 New York City blackouts. While the concept was excellent in theory, in practice it has not worked out as expected, gathering less than twenty responses.

City-Centred Sites

It would be impossible to review all of the sites for individual cities in a short essay. Over one hundred and fifty sites from 83 different cities are listed at H-Urban's webography.⁷³ These include a few placed on line for chamber-of-commerce-type reasons, which seem to contain useful, trustworthy information. The

best sites have been created by museums, preservation groups, public libraries or universities. The most common content is still photos and timelines, although finding aids for local archival collections are increasingly common. Sooner or later most urban historians are likely to be drawn into the creation of such web sites. The greatest problem in operating a web site is constant maintenance. In general, libraries and museums seem to be best at this. Sooner or later, community volunteers run out of gas.

Probably the best local site is *Historic Pittsburgh*.⁷⁴ A joint project of the University of Pittsburgh and the Western Pennsylvania Historical Society, the site currently provides access to 294 digitized books (mostly older, out-of-print works), 472 plat maps from 1872 to 1925, together with finding aids to 64 archival collections documenting the history of the Pittsburgh region as found in the holdings of the sponsoring institutions' libraries. The site is growing rapidly. *Historic Pittsburgh* has also digitized the manuscript U.S. Census from 1850 to 1880, which allows word searches. To illustrate the utility of on-line archives, I looked under the word "hostlers" for 1850 in Allegheny City (a place since annexed). Within ten seconds I had discovered that three of the eight hostlers in that city were in jail, two of the eight were Irish and two German, and that the Census did not distinguish between livery stable owners and their workers. The site lacks some things. There is no comprehensive bibliography. Another possible addition would be a link to *American Memory* since a search there for "Pittsburgh, Pennsylvania" drew 269 hits.

The French-language Montreal City Archives site is also attractive with many photos. It has an excellent finding aid/index for the city, its agencies, and some private archives. The site has an exceptional photo library containing digitized photos of Montreal and its municipal services. Finally, there is a virtual museum exhibit, "Montréal, municipalité et métropole, 1920–1960," that contains 301 digitized photos of Montreal displaying its buildings, sites, municipal services, and important figures. The site offers advanced search capabilities and the photos may be downloaded free. There is also an interesting photo collection for Montreal, *Albums de rues E.-Z. Massicotte*,⁷⁵ which contains 6,000 illustrations (pictures, postcards, photos) of Montreal from 1870 to 1920 from the collection of journalist and historian E.Z. Massicotte.

*Milwaukee's Urban Archives*⁷⁶ at the University of Wisconsin-Milwaukee are also useful. They include several virtual museum exhibits, abstracts, and descriptions of a number of municipal, ethnic, photo, corporate, philanthropic, and church holdings. There is an adequate, although purely local, collection of links but no bibliography or on-line text.

The City of Vancouver Archives⁷⁷ offers 12,500 photos with many more to come—mostly social and architectural history with advanced search capabilities. The same search function accesses the Archives' holdings of over 2,000 linear metres of records from non-government organizations documenting the social, political, economic, cultural, and community life of Vancouver. These include donations from pioneer families, politi-

cians, social activists, artists, entrepreneurs, and community organizations. The records are primarily texts, but they also include photographs, architectural drawings, maps, plans, and documentary art. The same finding aid works for city records.

*PLACES IN TIME: Historical Documentation of Place in Greater Philadelphia*⁷⁸ is the product of a collaborative effort by cultural institutions in Philadelphia. It is extremely rich in visual materials from city directories, postcard collections, architectural publications, real estate atlases, scanned maps, photos, and engravings. There are a limited number of texts, mostly available elsewhere, and a valuable list of these—even at the M.A. and B.S. level). The links page is excellent, connecting to sites outside the city, but there is no bibliography.

Other large cities have begun efforts like these, notably the new and growing *Integrated Digital Archive of Los Angeles (IDA-LA)*,⁷⁹ that links to such local collections such as Chinese and Korean historical groups and the Automobile Club of Southern California.

For a completely different approach to local history, see the *Encyclopedia of Cleveland History*.⁸⁰ This site is a unique and valuable tool, based on the printed volumes by the same name edited by David van Tassel (Indiana University Press, 1996). Over 2,000 short articles and many photos are linked by hypertext. *The Labyrinth of East London Lore*,⁸¹ a site about that South African city put together by the distinguished urbanist Keith Tankard takes a similar approach. Both sites are open ended allowing for frequent additions. At present the East London site is skimpier. Links pages, archival finding aids, and bibliographies would improve both. I suspect that many local sites will evolve in this direction with hyperlinked short articles added over long periods of time. The question is will they keep the high standards set by van Tassel and Tankard, both well-known historians. *Monuments and Dust: The Culture of Victorian London*⁸² is another example of an encyclopedic approach, which has some historical texts, statistical data, and a select bibliography, but no links. Maps are promised soon.

For neighbourhood history, *Harlem, 1900–1940: An African-American Community*⁸³ provides an excellent model. The Cultural Heritage Initiatives for Community Outreach (CHICO) at the School of Information, University of Michigan developed the site, based on a book of the same name published by New York's Schomburg Center, probably the leading library for the study of African-American culture. The web site is mostly focused on the Harlem Renaissance. The site includes a timeline, bibliography, and a searchable database, "Writers, Artists and Musicians" that includes brief biographies, and oral histories. Uniquely, visitors can listen to audios of musical works associated with the Renaissance. Alain Locke put on line the famous 1925 volume of Paul Kellogg's magazine *Survey Graphic* "Special Issue on Harlem,"⁸⁴ which includes essays by Countee Cullen, W.E.B. Dubois, Melville Herkovits, Langston Hughes, James Weldon Johnson, Arthur Schomburg and Walter White. The University of Virginia's electronic text centre, Institute for Advanced Technology in the Humanities (IATH), "Visions",⁸⁵ one of the leaders in electronic scholarship for the humanities put this

very important source and many others cited here on line. The IATH home page is worth a look just to get a feel for the latest in technique.

The National Archives' *Portrait of Black Chicago*⁸⁶ has a wonderful collection of photos taken by John H. White documenting Chicago's black neighbourhoods.

Also see *Queens Local History Collection*⁸⁷—I know, Queens is more than just a neighbourhood—a local history collection that houses 2,000 photo images and a hundred oral histories, as well as finding aids for documents relating to the political, social, and industrial history of that community. Bridgeport Lock Zero⁸⁸ at the University of Chicago-Illinois (UIC) does an excellent job on that famous Chicago neighbourhood, with better links and bibliography than one would expect for a neighbourhood site. UIC has been another one of the centres of the digital revolution.

There are also some good sites for suburban history, mostly by community groups and varying in quality. I found the following to be exceptional. Peter Bacon Hales, the noted University of Illinois-Chicago art historian, created *Levittown: Documents of an Ideal American Suburb*.⁸⁹ The newspaper *Newsday*, built *Long Island: Our Story*.⁹⁰ The American Studies Department at the University of Maryland has created *Virtual Greenbelt*⁹¹ about one of the famous New Deal planned communities. The site features an interesting tour of a 1940s home, now a museum. *History of Riverside*,⁹² a Chicago suburb planned by Frederick Law Olmsted, has a virtual tour sponsored by the local historical commission. *The Park Forest Digital Imaging Project*⁹³ has a well-indexed collection of oral history transcripts and photos for the 1950s Chicago suburb. Almost without exception suburban sites lack links and bibliography.

The City of Chicago has assembled *Chicago Landmarks*,⁹⁴ an easy-to-navigate, beautifully photographed site that contains interactive maps, tours, a style guide, and a database of over 17,000 buildings of historic significance. The building database identifies architects (where possible), and includes descriptions and photos of major buildings. The links page is very limited, with no connections to primarily historical web sites. Preservation guides to other cities are too numerous to list here, but Buffalo's Architectural Museum⁹⁵ is a good example.

For the more politically oriented, The *LaGuardia and Wagner Archives*⁹⁶ contains numerous, well-indexed photos, and finding aids to the archival collection and oral histories not only of New York City mayors Fiorello LaGuardia and Robert Wagner, but also of their successors Abraham Beame and Edward Koch. No archival texts are included. The archive also plans to add the records of the New York City Council and the Housing Authority. The site has a problem more common with those developed by amateurs or non-historians—no identification of the site's designer or the archive's director. Aside from the lack of context for the information displayed, this lack of credits makes contacting responsible parties difficult or impossible.

It is too bad that no city has chosen to put municipal historic documents of historic significance on line.

Archaeology has been a topic of considerable interest to urbanists in recent years. For a modern, downtown dig, see *Little Lonsdale Street, Melbourne*,⁹⁷ which has documents, photos, and an analysis of the nineteenth-century artifacts found on a site near Melbourne's central business district.

At the *Five Points* Site,⁹⁸ archaeologists and historians rediscover the famous nineteenth-century New York neighbourhood. That neighbourhood is well-webbed, perhaps more than any other in North America. For example, see the Lower East Side Tenement Museum,⁹⁹ which contains visitors' accounts, archaeology, and transcripts of oral history. The text and photos of Jacob Riis, *How the Other Half Lives*,¹⁰⁰ have been put on line by the American Studies Department at Yale University.

Good museum sites abound, usually linked with libraries, although it is remarkable how few urban libraries have links to historic sites in their communities. The Chicago Historical Society's outstanding site,¹⁰¹ is probably the prototype for an urban museum web page with archival materials, photos, images of artifacts, and monograph-quality analyses of the 1872 Chicago fire and the 1892 Haymarket Riot. There is also an excellent links page. *The Dramas of Haymarket*¹⁰² contains the Society's collection of documents, illustrations, and analysis of the famous Chicago riot. See the review of this site done for H-Urban by Janice Reiff.¹⁰³ *The Great Chicago Fire*¹⁰⁴ is also very high quality. See the H-Urban review of this site by Susan Williams.¹⁰⁵ Both are valuable teaching and research resources, perhaps because Carl Smith, the prize-winning Northwestern historian, curated both presentations.

Stefan Bielinski of the New York State Museum has begun the *People of Colonial Albany Project*.¹⁰⁶ The site is primarily aimed at the public, but already includes much information of value to the professional scholar, including maps, illustrations, 18 cross-indexed "theme" essays, a list of those counted in the 1697 and 1790 censuses (as well as all black families from the 1815 City Directory), and a thorough bibliography. *The Museum of San Francisco*¹⁰⁷ is very episodic, but has lots of photos and documents, as well as on-line exhibits about the earthquakes and other historical events. *American Memory* also has a lot of photos of the 1906 earthquake and even before-and-after documentary films.

*The Skyscraper Museum*¹⁰⁸ has photos, timeline, and virtual exhibits from the new museum in New York City. The data seems mostly drawn from the excellent monograph of its director, Carol Willis.¹⁰⁹ The site is very New York centric. Obviously the museum relies on photos, not artifacts. So visiting the place may work just as well in cyberspace as real space. Clearly this is an example of the book being better than the web site.

Urban studies centres rarely have web sites containing historical materials, except perhaps lists of links. The model here might be the Centre for Metropolitan History (University of London),¹¹⁰ which contains valuable bibliographies, lists of work in progress, reports on ongoing large scale research projects, and an electronic version of the out-of-print J.A.I. Champion, *Epidemic Disease in London* (London, 1993).

To move into the prescriptive realm, local web sites should always have credits, bibliographies, finding aids, and links (including some to national collections with pertinent information). This is the kind of scholarly paraphernalia that we expect from printed works. Almost all web sites include photos, an obvious advantage of the web, and timelines, but few sites take advantage of the possibilities for scanning documents such as directories and manuscript censuses, for oral history (especially transcripts), or for interactive or temporal mapping. Oddly, nobody provides a simple demographic history drawn from published census figures.

Scholarly Publication

The Internet is rapidly becoming a venue for scholarly publication, not, however, through the kind of low-quality, ephemeral "Internet journals," as were published by grad students in the early days of the web. The low esteem in which many of my colleagues hold electronic publication derives in part from these failed ventures, not just the Luddism usually blamed. That is not to deny that the latter is not influential; at least one of my technophobe colleagues still identifies the web mostly with pornography and plagiarism. In some departments it is a sin, *de facto*, for assistant professors to have anything to do with cyberspace. The key issue here is one of quality control. We evaluate books by reviews, by looking at the publishers, and especially by the distinction between peer-reviewed and non-peer-reviewed materials. Citations and book sales also measure reputation. In theory, all those judgments can be applied in cyberspace, just as they are in real space. Nor have these distinctions always been as hard and fast in real space as we would like to believe. Let me list three major works that have played extremely important roles in urban history discourse during the last forty years; Jane Jacobs, *Death and Life of Great American Cities* (New York: Vintage Books, 1961), Robert A. Caro, *Robert Moses and the Fall of New York* (New York: Knopf, 1974) and Joel Garreau, *Edge City: Life on the Frontier* (New York: Anchor, 1992). Any university presses here? Peer reviews? Authors associated with the academy? Ph.D. holders? Footnotes?

Of course evaluation can be difficult. How valuable is a scholarly web site that gets a thousand hits a week? Five thousand? Sometimes local web sites contain articles that strike readers as being clearly publishable in the most rigorous of traditional print media. For example there is an excellent piece by Carlos M. Larralde and Richard Griswold del Castillo, "San Diego's Ku Klux Klan 1920-1980" at *San Diego History*.¹¹¹ To be sure the essay appeared first in the magazine of the site's sponsor, the San Diego Historical Society, but there is no chance that I would ever have encountered it in real space. The essay certainly deserves wider professional exposure. How do we measure the value of essays like this on an unreviewed web site?

The first steps in electronic publication are already underway. *Cahiers de Histoire*,¹¹² *Journal of Urban History*,¹¹³ *The London Journal*,¹¹⁴ *Planning Perspectives*,¹¹⁵ *Urban History*,¹¹⁶ *Urban History Newsletters*,¹¹⁷ and *Urban History Review/Revue d'Histoire Urbaine*¹¹⁸ all put their tables of contents and in most cases, abstracts of their articles on line. Subscribing libraries

can now get the text of the *Journal of Urban History* on line. I suspect that other journals will follow. For readers this practice offers the quality guarantee associated with a traditional peer-reviewed periodical, plus word searchability, savings on storage space, and the ability to download only those articles or reviews wanted immediately. For the journal, there is a significant savings on printing and shipping. Actually the printing costs are being passed from the journal to the subscriber, a disadvantage to the reader.¹¹⁹ Journals also run the risk of losing subscribers because it's possible—although illegal and not always easy—to download from somebody else's subscription. Since traditional university presses and journals have, if not a lock, a very strong claim on credibility, they are likely to originate serious scholarly electronic publication with traditional articles presented in a traditional way, but on computer screens, not paper.

But, cyberspace is not paper and different standards of presentation are likely to emerge in the long run. For one thing, cyberspace is nearly infinite.¹²⁰ In theory, there is no reason why journals or publishing houses should place any limits whatsoever on the number of works that they publish or on the length of those works. In practice, the time investment of editors is a constraint, and so is the patience of readers. An informal survey of H-Urban readers suggested that they lost interest in reading reviews after roughly 1,800 words, unless they had downloaded the piece. By analogy, if someone wrote a 15,000-page book who would read it?

There are at least two well-known recent urban pieces with the imprimatur of traditional publishers available in cyberspace, both of which claim to show the future of scholarly presentation. With *The Journal of American History* and *American Historical Review* acting as on-line collaborators, *The History Cooperative*,¹²¹ approved and edited Philip Ethington's "Los Angeles and the Problem of Urban Historical Knowledge,"¹²² as part of the December, 2000 issue. The piece is in large part an essay in the traditional manner, essentially a post-modern methodological critique of traditional urban history that asks for the mapping of events in "a literal, not figurative sense." The essay contains several presentation novelties. When readers click on footnote numbers, the references pop up on the screen, completely bypassing their traditional place at the bottom or end of the essay. My graduate students argued endlessly (and tediously) about this innovation. Some liked having the notes on top of text, some complained that pop-up screens obscured the text to which they referred. Some complained that they were too slow. I think the latter two criticisms were valid for this piece, but both problems could have been avoided by better design. There is no reason why footnotes in general could not link directly to on-line texts or databases at a distant site, or link to a library catalog that included a call number or even link to an order for the book at Amazon or some other on-line bookstore in addition to the current citation and commentary format.

The Ethington site also includes media other than print, including maps (zooming, temporal and "straight"), photos, sequential views, quantitative data, films, and even what I can only call a sub-essay on Los Angeles historiography. All of them are

linked to a home page, so readers can enter through any of the essay's media, not just the essay preferred by traditional, linear historians. All of the different media are hyperlinked, so readers can jump from essay to photo to map to film to census data, to a discussion of analytic techniques and then back to the original place, if it can still be found. This cannot be conceptualized as a book or a video in traditional terms. There is no print equivalent of a streaming video or a temporal map. How do you define a piece in such traditional terms as an "article," when readers have so much freedom to choose what they scan or don't scan?

Some of Ethington's content does not work for me, such as his use of contemporary photos, when historical ones exist. Still the article is a wonderful display of technical virtuosity, to the extent that the reader is left wondering if all the whistles and bells really are needed. Indeed overuse of technology, including new techniques like Java Script can have the effect of excluding readers with older machines from reading new texts.

The University of Manchester Press gave its imprimatur to *City Sites: Multimedia Essays on New York And Chicago, 1870s-1930s*,¹²³ an electronic book edited by Maria Balshaw, Liam Kennedy, Anna Notaro, and Douglas Tallack. The "book" has ten essays about urban space, mostly neighbourhoods like Harlem or locations like Times Square, all linked to relevant maps and photos. The site has pop-up notes better placed and faster to load than Ethington's. Readers can hop from essay to essay looking for information on a particular topic through a unique "Pathways" feature, something that I have often wished I could do with multiple-author collections. This is the equivalent of reading a traditional work just by following the index entries, reading all the entries under "A," then all the entries under "B" and so on. Readers can move from reference to reference on a particular topic quite easily. Of course, this eliminates traditional narrative-style reading. *City Sites* includes not just images and maps like Ethington's, but hyper-links to lengthy passages from primary sources. Connecting to these is difficult, and sometimes impossible (to be fair, none of the other reviewers have commented on this, so it may be peculiar to my computer). There are almost no other links, despite the abundance of New York and Chicago sites. As I have said, an effective electronic publication ought to be link rich. For example the essay on Harlem could have been enriched by a link to *Harlem, 1900-1940: An African-American Community*, if for no other reason than to listen to the musical works there. Balshaw, et al., has been widely and favorably reviewed, mostly by literary scholars with an American Studies background.¹²⁴ There are plans to add essays about Los Angeles to the site soon. This raises another issue: web publications can be constantly changed and updated, while books require a new edition. On the one hand, how do we cite or review a work that may have a totally different format by the time our work appears? Should scholarly web works be frozen in time? How? On the other hand, what author of a print work has not wanted the opportunity to correct or update a book after publication? What is wrong with correcting and updating our work?

Reading web scholarship is both very marvelous and very disconcerting. I suspect that this is how the generation now being

raised on the web will read, jumping restlessly from text to text with images, sounds and words inter-mixed. Every allusion in the text could lead to another text, a footnote, a link a photo, a song, or even a distant web site. This kind of media leaves the reader in control, a heady trip for the scholar, but confusing perhaps for an 18-year-old freshman. Still, we will have to learn to read all over again.

Notes

1. <http://artsweb.bham.ac.uk/citysites/> (University of Birmingham Press, 2000). I have not noted the date when I visited the sites cited, as is the usual form. All were checked between June 1 and June 8, 2000. I have not cited any locations that came to my attention after that date. I want to thank my tireless co-editors at H-Urban, Charlotte Agustin and Wendy Plotkin. Agustin gave this essay an especially close and insightful reading. I'd also like to thank Sarah Elkind, Matthieu Flonneau, Eric Fournier, Michael Mezzano, Jim Neissen, Joel Tarr, and Ulf Zimmerman for their contributions.
2. <http://cwis.usc.edu/dept/LAS/history/historylab/LAPUHK/index.html> (The History Collaborative: December 2000).
3. *Double Fold: Libraries and the Assault on Paper* (New York: Random House, 2001). See the H-Net review by Mark Lambert at <http://h-net.msu.edu/cgi-bin/logbrowse.pl?trx=vx&list=h-law&month=0107&week=a&msg=PI3RmqX15DFOTWni2uEUJg&user=&pw=>
4. John Taylor, at Carleton University, made valuable suggestions about Canada. Michèle Dagenais of the Université de Montréal provided a valuable English-language summary of that city's web sites.
5. <http://www2.h-net.msu.edu/~urban/weblinks/index.htm>. If a reader wants to access one of the sites mentioned in this article, it may be quicker and certainly would be more accurate to go there to copy and paste the URL.
6. <http://www.nlc-bnc.ca/>
7. <http://www.uoguelph.ca/history/urban/citybib.html>
8. <http://www.unl.edu/uha/assoc.html>
9. <http://www.uidaho.edu/special-collections/Other.Repositories.html>
10. <http://cweb.loc.gov/coll/hucmc/usframes.html>
11. <http://pppp.net/links/news/>
12. <http://www.culturenet.ca/>
13. <http://www.usask.ca/archives/car/municmenu.html> links municipal
14. <http://www2.h-net.msu.edu/~urban/>. Plotkin is still the engine that drives H-Urban. Her role in creating this essential web resource may well make her the most important contributor to urban history in the last decade.
15. <http://h-net.msu.edu/cgi-bin/logbrowse.pl?trx=vx&list=h-urban&month=0105&week=b&msg=rS2Wg/fo6r7tVuMT%2b8%2bYcA&user=&pw=>
16. With Jeff Stine, <http://h-net.msu.edu/cgi-bin/logbrowse.pl?trx=vx&list=h-urban&month=0105&week=b&msg=rS2Wg/fo6r7tVuMT%2b8%2bYcA&user=&pw=>
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Surf City: A Guide to the Web for Urban Historians

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104. <http://www.chicagohs.org/fire/index.html>
105. <http://www.unimelb.edu.au/infoserv/urban/hma/hurban/1997q1/0133.html> (February 25, 1997).
106. <http://www.nysm.nysed.gov/albany/>
107. <http://www.sfmuseum.org/hist1/index0.html#afam>
108. <http://www.skyscraper.org>
109. Carol Willis, *Form Follows Finance: Skyscrapers and Skylines in New York and Chicago* (Princeton Architectural Pr; 1995); See the review of the museum by Andrew Meyers at <http://www2.h-net.msu.edu/reviews/exhibit/showrev.cgi?path=47> (1997).
110. <http://ihr.sas.ac.uk/cmh/cmh.main.html>
111. <http://www.sandiegohistory.org/index.html>
112. <http://www.revues.org/cahiers-histoire/>
113. <http://www.sagepub.com>
114. <http://www.ihrinfo.ac.uk/cmh/londonjournal/>
115. <http://www.tandf.co.uk/journals/alphalist.html>
116. http://www.journals.cup.org/owa_dba/owa/ISSUES_IN_JOURNAL?JID=UHY
117. <http://www.unl.edu/uha/news.html>, <http://www.le.ac.uk/ur/resources/newsletter.html> It would probably be simpler if the more junior of these changed its name to "Bulletin."
118. <http://www.science.mcmaster.ca/Geography/urbanhis.html>
119. Environmental historian Sarah Elkind points out to me that paper consumption might actually increase because it is so easy to download materials found in cyberspace. Somebody produced all those electrons from a fueled power source.
120. To be sure, extra servers and plenty of electricity are needed.
121. <http://www.historycooperative.org/>
122. <http://cwis.usc.edu/dept/LAS/history/historylab/LAPUHK/> (The History Collaborative: December 2000)
123. <http://artsweb.bham.ac.uk/citysites>
124. See William J. Maxwell, Review of CITY SITES: MULTIMEDIA ESSAYS ON NEW YORK AND CHICAGO, 1870s-1930s (H-Amstdy, May 17, 2001) <http://www2.h-net.msu.edu/~urban/weblinks/3wlinks/3wreviews/maxwell17052001rev.htm>; Stephen Shapiro, Review of CITY SITES: MULTIMEDIA ESSAYS ON NEW YORK AND CHICAGO, 1870s-1930s (H-Amstdy on May 18, 2001) <http://www2.h-net.msu.edu/~urban/weblinks/3wlinks/3wreviews/shapiro18052001rev.htm>; Deborah L. Parsons, Review of CITY SITES: MULTIMEDIA ESSAYS ON NEW YORK AND CHICAGO, 1870s-1930s (H-Amstdy on May 18, 2001). More critical was Peter C. Baldwin, CITY SITES: MULTIMEDIA ESSAYS ON NEW YORK AND CHICAGO, 1870s-1930s <http://www2.h-net.msu.edu/~urban/weblinks/3wlinks/3wreviews/baldwin17032001rev.htm> (H-Urban on March 17, 2001).