Use of Internet Sources in International Studies Teaching and Research

WAYNE A. SELCHER
Elizabethtown College

This bibliographic review discusses and evaluates cost-free, reliable, quality online content useful to academics in international studies teaching and research at the college level, including how and where to locate such materials through guides, directories, gateway sites, repositories, and various types of search engines; considerations about Internet use in college classes; and undergraduate assignments that use sources of information from the Internet. There is also consideration of characteristics and trends of college student use of the Internet for research purposes, the "invisible" or deep web, electronic information literacy for academics, and maintaining current awareness on the fast-changing web.

Keywords: teaching, research, Internet, international studies

This essay sets out some basic practical techniques, tips, and cost-free or low-cost sources to consider for judicious use of the Internet in undergraduate courses and faculty research in international affairs. It is based largely on the author's experience since 1999 as creator and editor of the very widely used and referenced Internet directory, the WWW Virtual Library: International Affairs Resources ⟨http://www.etown.edu/vl/⟩, and in using Internet resources in several undergraduate international affairs courses.

The Internet increasingly affects real-world international relations (Bollier, 2003), in e-commerce and e-conferencing in international business, grass-roots "global civil society" nongovernmental organization (NGO) campaigns, use of the Internet by Zapatista rebels in Mexico and by Al Qaeda and Iraqi fighters resisting the United States, the blocking of websites by dictatorships in Saudi Arabia and China, the blocking of Nazi-oriented sites in Germany, and the use of website hacking in political protest. After the September 11, 2001 terrorist attacks, the United States government shut down or removed material from its websites judged sensitive for national security. The use of weblogs and alternative news websites for commentary during the Iraq War that began in early 2003 provided yet another circumvention of both governments and the press as information gatekeepers (Reynolds, 2004). Newsgroups, usegroups, weblogs, scholarly discussion lists, and professional web forums promote rapid international exchange of ideas among persons with similar interests and situations, such as through Mailgate ⟨http://www.mailgate.org⟩, a European newsgroups center in many European languages, based in Rome. Discussion list sites such as H-Diplo ⟨http://www.h-net.msu.edu/~diplo/⟩ facilitate a worldwide professional conversation, in this case about

international relations and diplomatic history. The Internet itself, appropriately, reflects many of the characteristics of international politics as an area of human interaction—decentralization, difficulties in governance, competition and attempts at dominance, security and terrorism issues, a rich vs. poor access gap, American and English-language predominance vs. multiculturalism, emerging multipolarity, rising ''powers'' or poles such as China and India, nationalisms, free access vs. dictatorships, rapid change, and so on.

Most of the top-selling international relations textbooks now feature a companion online site with interactive teaching and learning resources, chapter by chapter, including suggested Internet sources on that site and in the text. Publishers are offering various types of online products as supplements for course topics, sometimes independent of the particular text used, and as coursepacks. The information culture is changing rapidly, regarding inputs, use, and access. Yet, somewhat as was the case when teachers of mathematics in the mid-1970s resisted the use of hand calculators by students, professors are rather suspicious and slow to accept the Internet as a valid and rich source of information and analysis in international affairs courses. Professors lament the dwindling of the traditional socializing library culture and the advisory role of the professional librarian. They have concerns about research paper mills and temptations for cut-and-paste plagiarism. They sense that students are ''overusing'' net sources because they are so convenient and attractive, even though quality issues may receive insufficient attention and alternative sources may not be considered (Graham and Metaxas, 2003; Barberio, 2004). Student use of Internet and other electronic sources is on a clear growth curve, but student Internet guides (Frazier, 2002) may not be seeing corresponding use.

Library gate count totals, check-outs, and citations of books and print articles in research papers are lower than before the Internet. The Association of Research Libraries found a drop of about 9% in the median of the total circulation figures for the 112 ARL university libraries from 1998 to 2002 ⟨http://fisher.lib.virginia.edu/ arl/⟩. Both students and faculty trust print or library sources more, but try first with online sources, according to the Council on Library and Information Resources ⟨http://www.clir.org⟩. Yet both students and professors at this point are caught between traditional library research skills and Internet research skills. Undergraduates as a whole are particularly weak on both sorts of ''information literacy'' and the degree of their Internet research skills varies widely within a single class. The teaching of thorough skills and a thoughtful, critical approach to quality research on the Internet is spotty and relatively rare, including in freshman orientation courses and by college and university libraries. Some of the professional academic staff still seems to be behind the power curve. Nor do professors as a whole appear to be calling for such student training, even though they often express the belief that use of the Internet has deteriorated the quality of student research. Ultimately, even if college students do learn proper Internet research skills from librarians, a very appropriate place, only their professors have the guidance opportunities and specific subject matter knowledge to encourage, specify, and demand credible sources and proper online citation styles for actual coursework (Davis, 2003).

Internet content is very much driven by e-commerce and popular culture, not by academics or intellectuality. It is not like a library or an encyclopedia. It is far longer on quick facts, data, sales pitches, and superficial or popular culture information than it is on in-depth scholarly analysis and interpretation. Quality control, reliability, and authoritativeness of information are major issues. The greater part of what is most insightful and conceptually valuable is in print but not on the Internet. Most professional journals and magazines post only a small portion of their content online, mainly to promote paid subscriptions. There is, however, a great quantity and diversity of valid and cost-free full-text information and analysis online about current and recent international affairs for those who learn where and how to access it.

The PDF file (Portable Document Format, most commonly programmed and read in Adobe Acrobat) facilitates the transfer of a long article or report to electronic and online format and is very widely encountered on the academic, governmental, international, military, intergovernmental organization (IGO), and NGO portions of the net. PDF material is very easy to save on one's own computer and also very useful for posting one's own academic production on one's website. Streaming audio and video, including in many languages other than English, are freely available, including for news and practice in foreign languages. Audio clips of famous speeches are also available. Online broadcasts of radio and television programming from around the world are readily accessible with high-quality sound, to play through RealPlayer, Windows Media Player, and Winamp. Examples would be the BCC World Service ⟨http://www.bbc.co.uk/worldservice/index.shtml⟩ and the Canadian Broadcasting Corporation ⟨http://www.cbc.ca⟩. There are also some excellent paid options to access high-quality scholarship and other academic material online, some of which are available for individual as well as library subscription (Ettinger, 2002; Golderman and Connolly, 2002). The chief of these is Columbia International Affairs Online (CIAO) of Columbia University ⟨http://www.ciaonet.org⟩. The Public Affairs Information Service (PAIS) ⟨http://www.pais.org/⟩ specializes in "the world's public affairs, public and social policies, international relations, and world politics." Another outstanding selection is the All Academic Archive of All Academic ⟨http://www.allacademic.com⟩, in the company's words, a "collection of original research available to individual and institutional subscribers. The database contains refereed primary research from conventions, journals, and other sources."

Quality Internet searching for the best sources beyond merely "finding something" in a hit-or-miss way is definitely more difficult and requires much more patience and constant updating of techniques than does traditional library research. This research complexity is guaranteed by the huge number of websites, quality issues, and the severe weaknesses of the cataloging and ranking systems relative to the requirements of serious inquiry. As of late 2004, Google ⟨http://www.google.com⟩ alone had catalogued over eight billion sites, with the number rising rapidly, so entry of an overly simple search term such as merely "Iraq" will produce millions of hits. Information overload is very much a feature of Internet use, requiring sharp management and judgment skills. Typical undergraduates have partial and haphazardly acquired online research skills and do not realize the degree of their effectiveness deficit in finding and evaluating material. The common Internet user tendency, with a short attention span and lack of a coherent approach, is to insert a search term or two in the simplest interface of a search engine, find some results (often unevaluated) that look acceptable, and rapidly move on or give up (Hopkins, 2003). The common habits of quick glances, hurried scanning, random and rapid click-throughs, seeking instant results, opting for convenience, and favoring text-bites militate against serious Internet research. Amusing graphics, "cool" design, animations, videos, sound, "eye candy," pop-ups, paid inclusion of sites, and advertisements can be major distractions from the academic purpose served by accessing quality and accurate content. It is all too easy to overlook excellent sources in a chain of linkages or in links scattered around an organizational page. Many persons key into only the top 10 or (at most) 20 entries on a search engine results list, and often only the first page, when those ranked well further down may be more relevant to them. Another common error is to fail to use the varied "advanced" or "power" search, search by topic, directory, and other special features of the major search engines, as well as their much better known simple search interfaces located on the first or index page of the website.

Most young persons are very connected, but see the Internet much more as a recreation, music, entertainment, communication/socialization (e-mail and instant messaging), or purchasing medium than as an academic or library platform. Their knowledge of the Internet is very heavily in youth popular culture areas, and they

are still weak on both research skills and evaluation of what they find. The degree of student self-confidence about their web use skills may be higher than their actual skills level would justify. Yet most students turn first to finding Internet sources for class projects, even while often overestimating how much of their assignments could be done well on the Internet as contrasted with traditional library research in printed materials (Barberio, 2004). A common shortcoming is to enter simple key-words into search engines without prior thought, then flip through pages so fast that one misses important linkage options that would be vital to the best results in the topic. There are recent surveys about college student and faculty habits in Internet use that faculty should be aware of, to encourage more critical thinking and more appropriate research strategies and styles for more successful academic uses of the Internet (Friedlander, 2002; Online Computer Library Center, 2002; Pew Foundation, 2002; Bond, 2002; Hopkins, 2003; Electronic Publishing Initiative, 2004). One major 2002 study by the Online Computer Library Center concluded that undergraduates tend to rely heavily in their Internet research on the most-used search engines and web portals, or on course-specific webpages. They do not use "online study aids or groups, or essay and paper websites." Further, "nearly two-thirds strongly feel they know best what information to accept from the web. Only 4% think the quality of information they find is not good enough for their assign-ments. One-fourth say they find too much, but only one-in-10 report that the information they find is not enough to be useful." . . . "Only half agree completely that information on the web is acceptable or approved for study assignments. Less than two-thirds agree completely that the range of resources on the web is adequate. Students also want the information they find to be up-to-date, and the authors or sources of the information need to be easy to find. College students are aware that the web does not meet all of their needs" (Online Computer Library Center, 2002).

Ideationally dense text apparently does not transfer well into online format, as shown in the sluggish sales of e-books. Many persons just prefer hand-held text or suffer eyestrain from long hours at the monitor. Online material read on a com-puter screen may promote casual browsing or skimming rather than deep thought, by virtue of the qualities of the medium. Sadly, many students are print-averse in any format, including electronic, and prefer bits of "interesting" information to an elaborated logical and sustained argumentation.

The hyperlink itself has advantages and disadvantages and affects how online users perceive and carry out their interactive activities, encouraging constant lat-eral, non-linear, and somewhat random movement (Feldman, 2001). Linkage fol-lowed without a sound and consistent research strategy brings the powerful temptation to wander and digress, to surf and be distracted, to browse away from rather than to narrow down toward one's subject target. In Internet research ter-minology, there is vertical searching (within a single topic, "boring down" into more detail, such as more detail within the topic of NATO) and horizontal searching (across related topics at the same level of specificity—i.e., wandering from NATO into other alliances generally or the concept of alliance). Both techniques have their place, but the online researcher should be able to tell which style is more appro-priate at a given moment and be able to stick with it.

There are a number of ongoing projects that faculty can consult for their own current awareness about online information resources. The Pew Research Center's Internet & American Life Project ⟨http://www.pewinternet.org⟩ is an excellent source of accurate information and analysis about many aspects of the Internet in American society, including the academic realm. The American Library Associa-tion's Information Literacy website ⟨http://www.ala.org/ala/acrl/acrlissues/acrlinfolit/informationliteracy.htm⟩ is also helpful to academics as "a gateway to and a gath-ering place for resources on information literacy focused on improving the teach-ing, learning, and research role of the higher education community." The Electronic Publishing Initiative at Columbia University is conducting an ongoing

study of academic uses of electronic resources, with reports available online at ⟨http://www.epic.columbia.edu⟩. There is a regular flow of books on best use of the Internet that faculty should consult to be fully effective as academicians (Alexander and Tate, 1999; Foreign Policy Magazine, 2001; Harnack and Kleppinger, 2003; Calishain, 2004; Hock, 2004). Many university and college libraries have webpages or handout sheets on searching for and evaluating web sources, that tend to direct students toward peer-reviewed, academic, scholarly, IGO, or governmental sites. The traditional book review style as applied to evaluating specific websites becomes outdated by the time the review is in print because of the pace of change on a well-managed website (CHOICE). Therefore, much of the best material about the Internet is on the Internet, where it can be regularly updated. The earlier annoying habit that webmasters had of changing URLs frequently with no connection to the new URL has, fortunately, slowed down, but care must still be taken to keep current the URLs that one uses for class assignments. The user must also beware of the common problem of valuable and perhaps assigned material being taken offline permanently, with no forewarning.

Quality Internet Research—Information Literacy and Beyond

Excellent sources to learn effective use of the disorderly Internet, including tutorials and citation standards, are annotated and linked on the WWW Virtual Library: International Affairs Resources page at ⟨http://www.etown.edu/vl/starter.html⟩. Quality Internet research requires its own skills and a diligent and careful strategy, which are best mastered in a systematic fashion (Cohen, 2002). Improved techniques can be acquired gradually by following advice given by professional online researchers, many of whom are librarians, maintain websites, and offer free e-mail newsletters for your "current awareness" updating. Websites run by reference e-librarians will be very useful to the scholar of international affairs. Some of the best and constantly updated websites that cover many academic disciplines at present are the following:

- Rita Vine, Site Lines: Ideas about Web Searching ⟨http://www.workingfaster. com/sitelines/⟩;
- Roddy Macleod, Internet Resources Newsletter ⟨http://www.hw.ac.uk/ libWWW/irn/irn.html⟩;
- Gary Price, Resource Shelf ⟨http://www.resourceshelf.com⟩ and DocuTicker ⟨http://www.docuticker.com⟩;
- Tara Calishain, ResearchBuzz ⟨http://www.researchbuzz.com⟩;
- David Novak, The Spire Project ⟨http://spireproject.com⟩;
- Danny Sullivan, Search Engine Report ⟨http://www.searchenginewatch.com⟩;
- University of Wisconsin, Internet Scout Project ⟨http://scout.wisc.edu/⟩;
- University of California at Berkeley Digital Library SunSITE, Current Cites ⟨http://sunsite.berkeley.edu/CurrentCites/⟩ and Librarians' Index to the Internet. ⟨http://lii.org⟩;
- T.Matthew Ciolek, Information Quality WWW Virtual Library ⟨http:// www.ciolek.com/WWWVL-InfoQuality.html⟩;
- Netsurfer Communications, Netsurfer Digest ⟨http://www.netsurf.com⟩;
- Marylaine Block, Neat New Stuff on the Net ⟨http://marylaine.com/neatnew. htm⟩ and ExLibris ⟨http://marylaine.com/exlibris/index.html⟩;
- Free Pint Limited, Free Pint ⟨http://www.freepint.com⟩;
- Netsurfer Digest ⟨http://www.netsurf.com⟩.

Governmental and IGO Internet Sites

The United States government, most national governments, and international organizations are among the best sources of cost-free and authoritative information

and analysis online. The United Nations, its affiliated IGOs, and the European Union are particularly rich IGO sources of information, data, statistics, and analysis. Most of these sites are quite large and have efficient internal search engines and other methods to locate material accurately. The major sites in these categories are linked and annotated on the corresponding pages of the WWW Virtual Library: International Affairs Resources ⟨http://www.etown.edu/vl/⟩.

Search Engines: General, Specialized, Geographic, and Limited Area

For most users, search engines are the gatekeepers of the online world, even though they are essentially literal and mathematically driven programmed machines without content quality or reliability control (Lamb, 2004). Academic users should know that search technology has become a bona fide and very competitive industry (attracting much paid advertising) and is in very rapid evolution. As with voting, the process employed greatly affects the outcome, as in how to determine page-ranking order in the results of queries. Current tendencies of change appear to be toward "natural language" searching and personalization to tailor results more accurately to the interest profile of each user. Wise webmasters tailor their sites for maximum ranking on search engine results, a goal known as "search engine optimization." The best current information on the rather frenetic world of search engines is available at Search Engine Watch ⟨http://searchenginewatch. com⟩, Search Engine Showdown ⟨http://www.notess.com/search/⟩, Pandia Search World ⟨http://www.pandia.com/searchworld/⟩ and About's Web Search section ⟨http://websearch.about.com⟩. There are many seminars in several countries on web searching, conducted by specialists; see, for example, WebSearch University at ⟨http://www.websearchu.com⟩.

Of the general search engines that attempt to crawl the whole accessible net, Google ⟨http://www.google.com⟩ sets the world-class standard and is the most-used (including by students) at the moment, to the point that the name has become a verb and newspaper articles refer (erroneously) to libraries as "old search engines" (Hafner, 2004). Most Google users, however, are unaware of its many features and do little more than insert a search term into the simple interface. On the "Advanced Search" page, beyond variations in wording of terms, Google allows optional searches limited to certain types of files—PDF, MS Word, MS PowerPoint, and MS Excel, among others—or only in specified languages. Google itself has a "help" feature but provides very little in-depth guidance on its use, relative to the vast potentials. There are excellent manuals and websites on how to get the most out of Google, which the serious user should definitely consult on a regular basis. (Busby, 2003; Calishain and Dornfest, 2003; Calishain, Dornfest and Adams, 2003; Collingwood, 2003; Calishain, 2004; Milstein and Dornfest, 2004; Piper, 2004; Schneider, Blachman and Fredicksen, 2004). Also see the helpful online Google Guide ⟨http://www.googleguide.com⟩ by Nancy Blachman and the Google Weblog ⟨http:// google.blogspace.com⟩ by Aaron Swartz. GoogleAlert ⟨http://www.googlealert. com⟩ allows you to receive e-mail alerts on topics or sites of your interest. For an example of the use of Google as applied to an international studies topic, see the online manual "Using Google for African Studies Research: A Guide to Effective Web Searching" at ⟨http://www.hanszell.co.uk/google/⟩.

Different search engines have different capabilities, advantages, and disadvantages and produce different results and styles of presentation of results. Some variations include producing concept-clustered graphics of inter-relationships among sites found, querying numerous search engines at once ("metasearch," with aggregated and clustered results), and providing suggestions (including alternative terms and web directories) to narrow the search. It is even possible to map the inter-relationships among major websites or concepts in graphic form as a network of nodes of different sizes; see Kartoo ⟨http://www.kartoo.com⟩ and Mooter ⟨http://

www.mooter.com⟩. Effective Internet searches require the user to learn the basics about how search engines collect information and organize their retrieval systems and to master some common terms and techniques. Tweaking keywords or key phrases, varying the syntax of search terms, using synonyms, and using several keywords at a time (a ''search string'') on most search engines yield impressive differences in results. So does use of quotation marks to make a set of words into a single phrase; on most search engines ''*arms control*'' yields a far more precise return of focused results than *arms control* without quotation marks. Correctly using special syntax such as ''+'', '' − '', ''*'', ''AND'', ''OR'', ''NOT'', ''related: URL'', ''title: search topic'', or ''intitle: search topic'' in the search box will also allow you to modify search results in the direction you desire. You can limit your results by domain, such as .edu, .mil, or .gov. Check for the rules for such modifiers in the ''Help'' or ''Search Tips'' section of each search engine that you are using. Most search engines allow you to ''search within results'' after the first search for a term, so that you can then gradually narrow down the ensuing sets of results. Advanced search engine interfaces allow much more control and accuracy of results than the much more commonly used simple interfaces. Most search engines also offer directories and subject headings to make your inquiries more precise. Other features are constantly being introduced, so the wise academic searcher does well to stay informed of those trends. Searchers should be sure to use several search facilities most attuned to producing the best results for their own needs on each thorough search.

Widely recommended ''open web'' search engines include:

- Teoma ⟨http://www.teoma.com⟩;
- WiseNut ⟨http://www.wisenut.com⟩;
- Yahoo! ⟨http://www.yahoo.com⟩;
- HotBot ⟨http://www.hotbot.com⟩;
- Gigablast ⟨http://www.gigablast.com⟩;
- Excite ⟨http://www.excite.com⟩;
- MSNSearch ⟨http://search.msn.com⟩;
- AlltheWeb ⟨http://alltheweb.com⟩;
- Soople ⟨http://www.soople.com⟩ (uses mainly the advanced features and options of Google);
- KartOO ⟨http://www.kartoo.com⟩ (produces thematic results clustered by topics and websites);
- Mooter ⟨http://www.mooter.com⟩ (produces thematic results clustered by topics and websites).

Search facilities that query multiple engines at once include:

- Dogpile ⟨http://www.dogpile.com⟩;
- IceRocket ⟨http://www.icerocket.com⟩;
- MetaCrawler ⟨http://www.metacrawler.com⟩;
- ProFusion ⟨http://www.profusion.com⟩;
- Vivísimo ⟨http://vivisimo.com⟩;
- Mamma ⟨http://mamma.com⟩;
- Ixquick ⟨http://ixquick.com⟩;
- Fazzle ⟨http://www.fazzle.com⟩;
- Gimenei ⟨http://gimenei.com⟩;
- Ithaki ⟨http://www.ithaki.net⟩;
- ZapMeta ⟨http://www.zapmeta.com⟩.

Specialized (or niche) search engines search only within a certain subject matter (e.g., encyclopedic information, legal information, phone numbers, e-mail or street addresses, news, usenet postings, or weblogs) or within certain types of files (e.g., finding passages of text, PDF files, product manuals, sounds, or images). Two of the

best ways to find online images and photographs, for example, are the Google Image Search ⟨http://images.google.com⟩ and the Yahoo! Image Search ⟨http://images.search.yahoo.com⟩. A specialized search engine of a different sort that may prove useful is the Internet Archive ⟨http://www.archive.org⟩ that archives dozens of billions of webpages, most of which have been modified or taken offline. With this facility it is possible to retrieve material once on the Internet, but no longer there at the moment of the search. The Google Web cache feature provides similar results on off-line pages from the past, useful for one's own research or to verify student sources no longer online.

Regional or nationally bounded ("geographical") search engines or web directories are called for when one wants results from a given country or region, often in languages other than English. The standard or global version of Google, for example, will usually give far greater precedence to U.S.-based results even when one is researching another country or region of the world. Resources from a certain country are best found through a national search engine or portal site that indexes or references only sites from that country. Regional and national search engines are well identified by Search Engine Colossus ⟨http://www.searchenginecolossus.com⟩, among several sites. None of these local products has the sophistication or power of Google, for example. The local variant of Google or perhaps Yahoo! should be tried as well as the national sites, when possible. Examples would include Google Canada ⟨http://www.google.ca⟩, in English or French, Google Australia ⟨http://www.google.com.au⟩, Google India ⟨http://www.google.co.in⟩, Yahoo! Australia, and New Zealand ⟨http://au.yahoo.com⟩, and Yahoo! U.K. and Ireland ⟨http://uk.yahoo.com⟩. Note that these national variants offer the choice of searching either the entire Google or Yahoo! worldwide database or websites only within that specific country or national language(s). Opt for the latter if you wish to find national sources that usually do not receive a high page rank on the American-focused "global" version of Google. Be sure to check out Google's Language Tools page ⟨http://www.google.com/language_tools⟩, which allows one to search only within selected languages or countries and also identifies and links to the scores of national versions of Google around the world.

Limited area search engines search only within a database of selected and related sites rather than over the whole Internet, which provides far more focused and useful results per monitor screen. Some of these (essentially) combined databases include many thousands of high-quality documents or webpages from many different sources, usually on the same topic. For example, the University of Pittsburgh created and maintains the International Affairs Contact Net ⟨http://www.ucis.pitt.edu/iacnet/⟩, "a comprehensive database of organizations and experts in international affairs," accessible online without cost through a "limited-area, full text web search of the sites maintained in the directory."

Examples of world-class limited area search engines in the fields of human rights and peace and conflict studies would include:

- Huridocs, Hurisearch ⟨http://www.hurisearch.org⟩;
- University of Minnesota Human Rights Library, Meta Search Engine for Searching Multiple Human Rights Site ⟨http://www1.umn.edu/humanrts/lawform.html⟩;
- The British Council, Human Rights Network ⟨http://humanrights.britishcouncil.org⟩;
- International Relations and Security Network and the Center for Security Studies and Conflict Research, International Relations and Security Network Limited Area Search Engine ⟨http://www.isn.ethz.ch/lase/⟩;
- International Relations and Security Network and the Stockholm International Peace Research Institute, Facts on International Relations and Security Trends (FIRST) ⟨http://first.sipri.org⟩.

There are also very useful limited area search engines restricted to specific types of sites, certain Internet domains, and file types, such as these examples and their search fields:

- Google "Uncle Sam" ⟨http://www.google.com/unclesam⟩ American .gov and .mil sites only;
- SearchGov.com ⟨http://www.searchgov.com⟩ U.S. government sites only;
- 2Act.org, Congressional Research Service Reports ⟨http://2act.org/p/576.html⟩ the excellent CRS Reports series (not all of which is online);
- SearchMil.com ⟨http://www.searchmil.com⟩ .mil sites only;
- Law Crawler ⟨http://lawcrawler.findlaw.com⟩ law-related sites only;
- Search Adobe PDF Online ⟨http://searchpdf.adobe.com⟩ by keywords within PDF (Portable Document Format) files;
- Technorati ⟨http://www.technorati.com⟩ contents of millions of weblogs;
- Daypop ⟨http://www.daypop.com⟩ news sites, weblogs, and RSS feeds;
- Altavista News ⟨http://www.altavista.com/news/⟩ news stories only, with archives;
- Google News ⟨http://news.google.com⟩ news stories only, with archives;
- NewsTrawler ⟨http://www.newstrawler.com⟩ news stories only, with archives;
- Diplomacy Monitor ⟨http://diplomacymonitor.com⟩ diplomatic communiqués, transcripts, and official news releases, with archives;
- FindArticles ⟨http://www.findarticles.com⟩ online periodical articles available cost-free;
- MagPortal ⟨http://magportal.com⟩ online periodical articles available cost-free;
- University Law Review Project ⟨http://www.lawreview.org⟩ online law reviews.

Most of the Internet by far remains uncatalogued and is usually referred to as the "deep" or "invisible" web that the indexing crawlers or robots that feed search engine input cannot reach or that they are not programmed to retrieve. Many database sites and other sites with high quality and reliable information that would be of interest to the academic user fall within the deep web, including those that do not charge a fee for their content. Library online catalogs and World Bank or United Nations data are two categories of deep web sites. Bright Planet ⟨http://www.brightplanet.com⟩ contends that the deep web that is potentially publicly accessible as of 2004 is about 500 times as large as the "surface" or catalogued web. Techniques and technology to (try to) search this huge space are offered by Bright Planet and by Complete Planet ⟨http://www.completeplanet.com⟩. Also consult the Deep Web Research Subject Tracer Information Blog ⟨http://www.deepwebresearch.info/⟩. The IncyWincy search engine ⟨http://www.incywincy.com⟩ is designed to search into the deep web.

   Use of directories to locate organizational websites of probable interest and then to search within these sites with their own search facilities is one of the most effective ways to solve some of the deep web difficulties in research. Most research institutes and many NGOs post part of their analytical production online in fulltext, free of cost, but these papers or reports may not appear or be highly ranked on "full-web" search engine results if general search terms are used. Online professional papers and data of great academic value that are deep (URL length-wise) within databases or the huge websites of organizations such as a large think tank like RAND, the European Union, NATO, or the U.S. Department of State are often either uncatalogued or ranked very low in search engine results. The best approach in such cases is to know in a general way that, for example, the World Bank posts thousands of excellent papers on international and national development issues and to use the internal search engines and subsections of such sites regularly to find

current papers and data of interest. Find out which organizations, such as the Foreign Policy Association ⟨http://www.fpa.org⟩, regularly post papers or commentaries of interest to you, and either sign up for the relevant alert newsletters or visit their websites periodically to see what is most recent. You can also network horizontally by following the links that most such organizational websites have to other sites in the same subject matter area.

Directories, Gateway Sites, Repositories, and Libraries

Internet directories are virtual libraries for which subject matter specialists (information managers) serve as quality filters to select and annotate the top quality websites in a subject matter and keep these confirmed results up to date. The purpose of directories is to provide a mediated online environment for the user, rather than confronting a list of scores of thousands of undifferentiated results derived by the machine-like algorithm of a search engine. The original Internet directory and still the largest is the WWW Virtual Library system ⟨http://vlib.org⟩ begun by Tim Berners-Lee, the creator of HTML language and the concept of the Internet itself. It is a huge searchable database composed of about 250 online virtual libraries around the world, staffed by volunteers who are mainly academics. Another fine directory is the U.K.'s Social Science Information Gateway (SOSIG) ⟨http://www.sosig.ac.uk⟩. Many academic libraries have created smaller directories of links to the key websites in many fields, including international studies topics.

Whatever subject matter one is interested in, there are Internet directories to guide one to the highest-quality sites with valuable and credible information and analysis, mediated by a subject matter specialist as gatekeeper and cyberlibrarian. Many of these sites allow ready access to news reports and analysis, professional papers, and data onsite or linked from offsite. Gateway sites perform a similar function of aggregation under quality control and may be sponsored by a consortium of several major organizations. Some major gateway sites and directories in international relations or politics generally include the following:

- WWW Virtual Library: International Affairs Resources ⟨http://www.etown. edu/vl/⟩;
- Diplomaticnet ⟨http://www.diplomaticnet.com⟩;
- The Global Site ⟨http://www.theglobalsite.ac.uk⟩;
- MSU Global Access ⟨http://www.msuglobalaccess.net⟩;
- International Affairs.com ⟨http://www.internationalaffairs.com⟩;
- Internet for Diplomats ⟨http://internetfordiplomats.com⟩;
- Political Studies Association Website (U.K.) ⟨http://www.psa.ac.uk/www/⟩;
- Foreign Affairs Online ⟨http://www.people.virginia.edu/∼rjb3v/rjb.html⟩;
- Political Resources on the Net ⟨http://www.politicalresources.net⟩;
- International Relations and Security Network ⟨http://www.isn.ethz.ch⟩.

Examples of excellent international affairs gateway sites in environmental, development, and peace and conflict issues (usually with a directory function as well) include:

- Electronic Development and Environment Information System (ELDIS) ⟨http://www.eldis.org⟩;
- MIT, Global System for Sustainable Development ⟨http://gssd.mit.edu/GSSD/ gssden.nsf⟩;
- World Resources Institute, Earth Trends ⟨http://earthtrends.wri.org⟩;
- National Council for Science and the Environment, National Library for the Environment ⟨http://www.ncseonline.org/NLE/index.cfm⟩;
- Institute of Development Studies ⟨http://www.ids.ac.uk/ids/index.html⟩;
- Development Gateway ⟨http://www.developmentgateway.org⟩;

- International Conflict Research (INCORE) ⟨http://www.incore.ulst.ac.uk⟩;
- Conflict Resolution Information Source ⟨www.crinfo.org⟩;
- Beyond Intractability ⟨http://www.beyondintractability.org/iweb/⟩.

Some countries and regions have one or more institutions that can serve explicitly or implicitly as gateway sites to information about the international relations of that political entity and the local research community. Such sites may be in English and/or the national language, such as:

- Deutsche-Aussenpolitik (Germany) ⟨http://www.deutsche-aussenpolitik.de⟩;
- German Council on Foreign Relations ⟨http://www.dgap.org⟩;
- Institut Francais des Relations Internationales (France) ⟨http://www.ifri.org⟩;
- Norwegian Institute of International Affairs ⟨http://www.nupi.no/English/⟩;
- Clingendael: Netherlands Institute of International Relations ⟨http://www.clingendael.nl⟩;
- British International Studies Association ⟨http://www.bisa.ac.uk⟩;
- Royal Institute of International Affairs (Chatham House) (U.K.) ⟨http://www.riia.org⟩;
- Research, Teaching, Documentation and Dissemination Centre for International Relations and Development (CIDOB) (Spain) ⟨http://www.cidob.es⟩;
- Center for International Relations (Poland) ⟨http://www.csm.org.pl⟩;
- European Political Science Network ⟨http://www.epsnet.org⟩;
- Canadian Institute of International Affairs ⟨http://www.ciia.org⟩;
- RelNet (Brazil) ⟨http://www.relnet.com.br⟩;
- Consejo Argentino para las Relaciones Internacionales (Argentina) ⟨http://www.cari1.org.ar⟩;
- South African Institute of International Affairs ⟨http://www.saiia.org.za⟩;
- Japan Forum on International Relations ⟨http://www.jfir.or.jp/e/⟩;
- Japan Institute of International Affairs ⟨http://www.jiia.or.jp⟩.

Most academic disciplines and professional associations have websites that serve as searchable repositories of published or unpublished scholarly work or case studies, so it is wise for the user to find and consult frequently those of personal interest. There are also websites that post or index research papers, opinion and policy pieces, and case studies that may be onsite or held elsewhere, as well as provide related services. As illustrations, social science academics can rely on these, all of which include international topics and, in some cases, pedagogical helps and insights.

- American Political Science Association, et al, Political Science Research Online ⟨http://www.politicalscience.org⟩;
- Working Paper Sites of Political Science ⟨http://workingpapers.org⟩;
- International Studies Association, Conference Paper Archive ⟨http://www.isanet.org/archive.htm⟩;
- Latin American Studies Association, Papers from past Congresses ⟨http://lasa.international.pitt.edu⟩ (for members only);
- European Research Papers Archive ⟨http://olymp.wu-wien.ac.at/erpa⟩;
- Institute for the Study of Diplomacy of the Georgetown University School of Foreign Service; Faculty Club ⟨http://data.georgetown.edu/sfs/ecase/⟩ (case studies);
- Policy Library ⟨http://www.policylibrary.com⟩;
- Education-line ⟨http://www.leeds.ac.uk/educol/⟩ (educational research, policy, and practice);
- University of Sussex, The Global Library ⟨http://www.theglobalsite.ac.uk/global-library/⟩;
- Second Image, A Constructivism Resource ⟨http://home.pi.be/~lazone/⟩.

Networked library catalogs online are another source to check, especially to locate printed material. To cite some major illustrative examples, Copac ⟨http://www.copac.ac.uk⟩ is a union catalogue that "provides free access to the merged online catalogues of 22 of the largest university research libraries in the U.K. and Ireland plus the British Library." Gabriel ⟨http://portico.bl.uk/gabriel/index.html⟩ is a gateway to Europe's national libraries, a single point of access for the retrieval of information about their functions, services, and collections, with a search engine for all the WWW services of the national libraries. The European Commission Libraries Catalog ⟨http://europe.eu.int/eclas/⟩ provides bibliographical references for hundreds of thousands of publications on European affairs, without document delivery or copy service but with an excellent Internet resources search facility. The Military Education and Research Library Network (MERLN) ⟨http://merln.ndu.edu⟩ is the searchable joint site of military education libraries in the United States (mainly) and Europe, providing access to the library holdings and online information resources of the "largest and most comprehensive collections of military information resources in the world."

Conclusions

The Internet is a fine source for professional research or for class use of cost-free quality articles, news items, opinion pieces, statistics, official documents, reports, scholarly papers, public opinion surveys, and maps. There are, for example, several online sources of full-text treaties in the areas of war, peace, and arms control (Mattison, 2003). Beyond those raw materials, the interactive and data-manipulation potentials of the Internet allow the design of web-based assignments that both require accurate student use of concepts in the subject matter and develop insights into wise use of quality Internet resources for serious analysis. Such evaluated material can be used for courses while observing sound principles of undergraduate education (Warkentin, 1999; Ritter and Lemke, 2000; Lee, 2003). To use such sites effectively, faculty must first familiarize themselves with good practices of critical Internet use and then promote those practices in their students by example and mentoring. The ideal would be to go beyond gathering of sheer "information" to student construction of knowledge and habits of critical thinking and sound analysis in connecting course concepts with the outside world. For instance, to illustrate more concretely the concepts of (neo)realism and (neo)idealism in international relations theory, websites of NGOs or think tanks espousing those analytical approaches can be examined, compared, and contrasted regarding their interpretations of the same issue and the policy responses that they advocate. The two assignments in the Appendix are ones that we have used successfully several times in a classroom format and illustrate the educational value of informed Internet use in the international studies.

Appendix: Two Illustrative Undergraduate Assignments

Assignment One: Comparing and Ranking States – An Evaluation of the Data, Methodologies, and Conclusions Posted on Four Major NGO and IGO Websites

PS 150 (Comparative Politics) is a freshman-level course at Elizabethtown College, in which students learn to think comparatively and in a more rigorous fashion about societies and political systems. The following assignment is an example of how learning objectives can be achieved for both the political science concepts and the evaluative information literacy and analysis aspects of the course.
Learning objectives:

- to get a sense of the great range of variations among states worldwide on many variables;

- to consider the theoretical and practical difficulties in generalizing about, comparing, and contrasting diverse states worldwide at the national level;
- to begin to think about how the variables chosen, their operationalization, and analytical methods used will affect results, and;
- to practice judging for oneself the value of the contents of socio-politically oriented Internet sites.

Below are four well-known websites sponsored by famous organizations: two American NGOs, one German NGO, and one global IGO. All compare and rank many states on major socio-political variables. Quotes from the sites are included to summarize the purpose of each site. After we form teams of several students each in class, examine the site that your team is to analyze. Be sure to explore these websites thoroughly enough as a team to come up with concise (but accurate and complete) typed responses (at least one 4-inch paragraph on each question) and an oral/visual report to the class for all the questions on this worksheet. The reports are all to be given in class on the date assigned and the team papers handed in at that time.

- Transparency International. "Corruption Perceptions Index 2004" ⟨http://www.transparency.org/cpi/index.html⟩ "The TI Corruption Perceptions Index (CPI) ranks countries in terms of the degree to which corruption is perceived to exist among public officials and politicians" and Transparency International, "Bribe Payers Index 2002" ⟨http://www.transparency.org/cpi/index.html⟩ "The TI Bribe Payers Surveys are comprehensive studies on bribe-paying in international trade. It looks at key factors influencing corruption, covers unfair business practices, assesses the readiness of the private sector for the new ban on bribing foreign public officials and includes the Industrial Sector Ranking."
- Freedom House. "Freedom in the World, 2004" ⟨http://www.freedomhouse.org/research/index.htm⟩ (Some sections are in PDF format.) Note the Freedom House Map of Freedom 2004 (in PDF): ⟨http://www.freedomhouse.org/pdf_docs/research/freeworld/2004/map2004.pdf⟩ "Since 1978, Freedom House has published Freedom in the World, an annual comparative assessment of the state of political rights and civil liberties in 192 countries and 18 related and disputed territories. Widely used by policy-makers, journalists, and scholars, the 700-page survey is the definitive report on freedom around the globe."
- Heritage Foundation and The Wall Street Journal. "Index of Economic Freedom, 2004" ⟨http://www.heritage.org/research/features/index⟩ (Click on "Downloads" and "Countries" to access report.) "The Index of Economic Freedom is a practical reference guide to the world's economies. It includes country-by-country analyses and the most up-to-date data available on foreign investment codes, taxes, tariffs, banking regulations, monetary policy, black markets, and more."
- The World Bank Group. "Doing Business" ⟨http://rru.worldbank.org/DoingBusiness⟩ "The Doing Business Database provides objective measures of business regulations and their enforcement. The Doing Business indicators are comparable across 145 economies. They indicate the regulatory costs of business and can be used to analyze specific regulations that enhance or constrain investment, productivity and growth."

For the website that your team is to examine, write up your team's conclusions and report to the class on the following points:

(1) What is the stated nature and purpose of the organization sponsoring the website and producing the displayed data and analysis? What is the stated

purpose to which the user can put the data? What is the practical or theoretical interest of the topic in the field of comparative politics?

(2) Could you either expect or actually detect any potential organizational, political, national, or cultural biases in the topic selected, how the variables are defined, and how the rankings are put together? Is such bias, if evident, sufficient to make a careful observer suspicious of or selective in accepting the conclusions?

(3) What are the main variables? How are the variables operationalized (i.e., defined in a way so that they are measurable)? Can you think of alternative ways to operationalize the variables? Can you think of other relevant variables that were not used? Other country cases that were omitted but are relevant?

(4) Where did the data come from and who produced it? How solid (reliable, trustworthy, replicable by other "objective" observers) are the data and the procedures used to measure it?

(5) Does the presentation on the website make explicit how the data was gathered and interpreted and the limitations of the gathering and analysis methods and the results? Does the technological manner of presenting the data (including on-screen visual appearance and the "fun" of interactive manipulability) have an impact on the degree of credibility that an observer might take from it? Are there any unwarranted conclusions that the site itself draws or that a less cautious visitor to the site would draw? Are the claims made by the organization warranted by the data or are they faulty causal claims? Even if the data collection is sound, you should be able to recognize any faulty conclusions and causal claims that do not stand careful scrutiny.

6. How are the rank orders of countries (that is, 1,2,3 . . .) set up, if there are any? How confident can you be that these are actually reliable orderings and that the differences between rankings mean something in a practical and consistent way?

7. How would you assess the overall intellectual and logical integrity and credibility of the data and the accompanying analysis? (Can you, for example, find any independent online reviews of the site from credible sources?) What did the results tell you that is useful about the topic, as you start your study of comparing states?

8. Are there any other comments or questions of your own that you would like to add from your team's examination of the site?

Assignment Two: "What kind of Foreign Service Officer would you be?"

PS 245 (International Relations) is a sophomore-level course at Elizabethtown College in which students gain factual knowledge about world affairs and a conceptual frame of reference and analysis within which to understand the interactions of the roughly 200 states and many thousands of other international actors in the world today. The course uses a standard text, book of maps, lectures, videos with reaction sheets, group work, class discussions, and Internet assignments, most based on key concepts, process analysis, and problem solving.

To illustrate the text chapter on diplomacy we use a video on the work of ambassadors, made with assistance from the U.S. Department of State. Few of the students have ever even met a diplomat at this point in their lives. An Internet exercise is useful to help students personalize diplomacy a bit to (1) understand better what sort of functions diplomats perform, (2) relate their own personal interests, academic majors, and abilities in some detail to the work of diplomats, and (3) see for themselves how well they would fit into each of the five diplomatic career

tracks of the U.S. Foreign Service. The websites used are interactive, recruitment-oriented ones from the U.S. Department of State that tally up an individual bar-graphed ''score'' on the interest-based questions, somewhat like an aptitude test. The results are general enough that they serve to illustrate diplomacy as a process, not just the U.S. Foreign Service.

   Students read the websites from the U.S. Department of State ''Diplomacy: The State Department at Work'' ⟨http://www.state.gov/r/pa/ei/rls/dos/4078.htm⟩ and ''What does a Foreign Service Officer do? ⟨http://www.careers.state.gov/officer/roles/index.html⟩ then complete and bring to class their results from two inter-active online exercises with graphic presentations:

   • ''Is the Foreign Service right for you?'' ⟨http://www.careers.state.gov/officer/fsright/index.html⟩ which allows the site users to balance pros and cons of a Foreign Service career, in regard to their personal preferences.
   • Which Career Track is Right for You? ⟨http://www.careers.state.gov/careers/tracks.html⟩ which has fifty questions that resolve into a personal online profile so that the users can see comparatively how well their own skills and preferences fit the work space of each of the five Foreign Service career tracks.

We then profile results for the class as a whole on the chalkboard in class, in the context of the facts and concepts about diplomacy in the chapter of the text.

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