

The Thrill of Search

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Search is Changing Fast

- The search landscape is changing so fast I don't know who can keep up with it.
- Google comes out with something new every week. How can we *not* be overwhelmed?
- Half the stuff I say today is probably out of date because I researched it last week.
- The other half will probably be out of date next week.

From Dark Web to Open Access & Google Scholar

- In Spring 2004 I gave a talk on the Dark Web or Invisible Internet—the places not searched by ordinary search engines. Internet search has changed over the last 18 months. There's more light, more visibility. This is due in great part to burgeoning Open Access movement and in part to innovations like Google Scholar.

Nonetheless, Search is more challenging than ever.

- We are faced with a “fragmented and ever-expanding array of information tools,” to quote from a document I saw the other day.

Today we'll look at a few key 'open access' sites

- Particularly sites where you can search the full text of scholarly articles and related resources
- Also sites where you might be able to find FREE full-text pdf copies.
- LOTS to talk about—I'm only going to be able to scratch the surface.

Some Websites that offer full-text search—

- Google Scholar—this is the most popular and best known of all.
- Scirus—older, but less well-known, some find it more useful.
- Highwire—again less well-known, but a valuable, high-quality site.
- PubMed Central—fairly new and very worthwhile!
- BioMed Central—another valuable site.
- And maybe... PsycArticles and Science Direct.

But first, a few quick words about Full-Text Searching

- I love it, but we have to be aware of its advantages and disadvantages

Full-text searching is sometimes quite valuable!

- E.g., a broad search on a multidisciplinary topic.
- Finding that needle in the haystack, when you are searching a highly specific keyword, or combination of keywords.
- Full-text sites are very useful for discovery, when you are starting to explore a subject.

Caveats about full-text searching.

- Most searches aren't about distinctive keywords, or simple facts; most searches are complex.
- Keyword searching doesn't help you find related concepts. It doesn't help you deal with the problems of synonyms and variant phrasing.
- That's what controlled vocabularies do, but controlled vocabularies are less and less available today, partly for economic reasons and partly because search engine designers think they can write algorithms that do it just as well. The latter remains to be proven.

Now let's look at those websites: some basic questions.

- What do they cover?
- How fresh are they?
- Can you search full-text?
- Can you get free articles?
- When should we use them?

GoogleScholar

<http://scholar.google.com>

- Google is a very secretive organization. It doesn't offer a publisher list, journal list, or information about time-span or disciplinary coverage.
- Still, it's clear that GS sources include PubMed, various A/I databases, and several publishers (although GS doesn't *begin* to include all the articles from these publishers). This has been documented by Peter Jasco at the University of Hawaii.
- This is a major flaw: Google is a black box and we don't know what's in it, and what's not.

GoogleScholar : currency

- GS currency: I haven't found much information, but apparently GS is not as frequently updated as regular Google.
- Sometimes you can find articles in regular Google that are not in GS.

GS: searching & sorting

- Advanced search lets you search on Title or Full-Text; also Author, Date, and Journal Name.
- There was a HUGE problem with limiting by date (you would get more hits with a limited date-range than unrestricted), but that seems to be fixed.
- Citation order is determined by relevance ranking according to the GS algorithm. Older items come up first because they've been cited more.
- You can request “recent articles” first, but they won't be in order.

marijuana adolescents - Google Scholar - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://scholar.google.com/scholar?hl=en&lr=&q=marijuana+adolescents&btnG=Go

B Teoma G Join NCBI NLM T MCP L Times CSTAT C Direct C E M

Google Scholar BETA

marijuana adolescents Search

Advanced Scholar Search
Scholar Preferences
Scholar Help

Scholar All articles Recent articles Results 1 - 10 of about 15,000 for **marijuana adolescents**. (0.16 seconds)

All Results

M Resnick
P Bearman
R Blum
K Bauman
K Harris

... correlates of symptoms of last year dependence on alcohol, nicotine, **marijuana** and cocaine in the ... - group of 3 »
D Kandel, K Chen, LA Warner, RC Kessler, B Grant - Drug Alcohol Depend, 1997 - ncbi.nlm.nih.gov
... 1) nicotine is the most addictive of the four drugs we examined; (2) among female last year users of alcohol and **marijuana**, **adolescents** are significantly more ...
Cited by 95 - Related Articles - Cached - Web Search - Find It @ UMCP - BL Direct

Preventing alcohol, **marijuana**, and cigarette use among **adolescents**: peer pressure resistance ...
WB Hansen, JW Graham - Prev Med, 1991 - ncbi.nlm.nih.gov
Preventing alcohol, **marijuana**, and cigarette use among **adolescents**: peer pressure resistance training versus establishing conservative norms. ...
Cited by 164 - Related Articles - Cached - Web Search - Find It @ UMCP

Adolescent **marijuana** and alcohol use: the role of parents and peers revisited. - group of 3 »
TJ Dishion, R Loeber - Am J Drug Alcohol Abuse, 1985 - ncbi.nlm.nih.gov
Adolescent marijuana and alcohol use: the role of parents and peers revisited.
Dishion TJ, Loeber R. The present study focuses on ...
Cited by 81 - Related Articles - Cached - Web Search - Find It @ UMCP

Protecting **adolescents** from harm. Findings from the National Longitudinal Study on Adolescent Health - group of 5 »
MD Resnick, PS Bearman, RW Blum, KE Bauman, KM ... - JAMA, 1997 - jama.highwire.org
... drawn from an initial national school survey of 90118 **adolescents** from 80 ... and behaviors; violence; use of 3 substances (cigarettes, alcohol, **marijuana**); and 2 ...
Cited by 904 - Related Articles - Cached - Web Search - Find It @ UMCP - BL Direct

Cannabis dependence, withdrawal, and reinforcing effects among **adolescents** with conduct symptoms and ... - group of 6 »
TJ Crowley, MJ Macdonald, EA Whitmore, SK Mikulich - Drug Alcohol Depend, 1998 - ncbi.nlm.nih.gov
... The prevalence of cannabis use is rising among **adolescents**, many of whom perceive little risk from cannabis. However, clinicians ...
Cited by 60 - Related Articles - Cached - Web Search - Find It @ UMCP

Done

Sample GS Display

GS: Display

- As the sample shows, GS display can be messy. For the first “citation,” you can’t even see the whole title.
- The fourth hit is available free from JAMA, with registration, but that information isn’t provided, and you could end up spending a lot to buy it from BL Direct.

GS: Display

- Display doesn't indicate what you have access to...or what you'll see when you click on a hit.
- Sometimes, especially with books and citations, there is nothing to click to.

GS: Exporting

- It is possible to export some citations from GS to EndNote or other programs by setting Preferences, but only *one* citation at a time!!!

So why do we use GS with all its flaws?

- Sometimes a very fast route to full-text. If you are on a campus, links to full-text usually work seamlessly.
- It's good for finding highly cited articles.
- Like most of the resources covered here, it's wonderful for discovery, searching obscure topics....
- It presents the possibility of finding references and papers not found through the normal searching channels.
- BUT if you want high-quality results, *do not* depend on GS!!! You'll miss a lot!!!

A final thought on GS

- As someone has pointed out: Because GS comes from the web search realm, it tends to be disorganized.
- The two databases we are going to talk about next, Scirus and Highwire, come from the publishing and librarian realms, realms of database searching, and are therefore more user-friendly.

SCIRUS

www.scirus.com

- Launched in 2001 by Elsevier. Searches Elsevier's journal archives (Science Direct), PubMed Central, Biomed Central, preprints, institutional repositories, and selected science-oriented portions of the web.
- *Unlike GS*, it gives information on its partners and identifies its sources.
- Currency seems very good with Science Direct citations, less good with PubMed Central and BioMed Central. Do those searches directly.

Scirus Advanced Search

- You can search more fields than in GS, and you can specify “format” and “sources.”
- You usually want to *unclick* “the rest of the scientific web.”
- You can sort and limit by date; email citations, or download to EndNote.

tuberculosis AND drug AND abuse results on scirus.com, for scientific information - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.scirus.com/srsapp/search?t=all&q=tuberculosis+drug+abuse&c Go

SCIRUS for scientific information only

SCIRUS Your search Search Pop-up Blocker OFF Highlight

About Us Newsroom Advisory Board Submit Web Site Help Contact Us

Basic Search [Advanced Search](#) [Search Preferences](#) [Saved Results](#)

tuberculosis AND drug AND abuse Search

☒ Journal sources ☐ Preferred Web sources ☐ Other Web sources ☐ Exact phrase

Searched for:	All of the words tuberculosis AND drug AND abuse
Found:	842 total 842 journal results 0 preferred web results 0 other web results
Sort by:	relevance date

Save checked results Email checked results Export checked results

1. [Tuberculosis, HIV seroprevalence and intravenous drug abuse in prisoners.](#)
F A Drobniewski / Y M Balabanova / M C Ruddy / C Graham / S I Kuznetsov / G I Gusarova / S M Zakharova / (...) / I M Fedorin, Eur Respir J, Aug 2005
 High rates of **tuberculosis** (TB) and HIV are believed to

Your query was rewritten to:
 tuberculosis AND "drug abuse"
 We did this by adding quotes to common phrases, and by removing non-essential words.
 - [Repeat without rewrite](#)

Scirus sample full-text search

- Scirus rewrote this “all the words” search: tuberculosis drug abuse
- to: tuberculosis AND “drug abuse” (see lower right-hand corner of sample page).

This is an excellent use of artificial intelligence. Highwire, although a good database, does not do this.

- Full-text pdfs are available from several, but not all, sources in this database.

Summing up Scirus

- More searching options than GS.
- Superior search engine.
- Unlike GS, you pretty much know what you are searching.
- Much cleaner display.
- More export options.

Highwire www.highwire.org

- Like Scirus, Highwire is an aggregator, but from a greater variety of sources.
- To quote its homepage: 'A division of the Stanford University Libraries, HighWire Press hosts the largest repository of free, full-text, peer-reviewed content, with 986 journals and 1,444,430 free full-text articles online.' (accessed 10/9/06)

Highwire's sources

- Highwire partners with scholarly societies, university presses, and publishers.
- Click on “For institutions” to see Journals covered, alphabetically or by topic (though you won’t find substance misuse or abuse as a topic heading).
- Or click on Browse for list of journals with free full-text, including those with current trial periods, and those where only certain issues are free.

Highwire searching

- High quality site for searching and sorting.
- To search on full-text, go to Advanced Search. (Click Search at the top.)
- You have options for searching by field, limiting by date, and sorting.

Highwire Display

- Display is very busy and graphic, but articles that are available free are clearly marked on the left, and the price of those that are not free is clearly marked on the right. Link to abstract also clearly marked.
- Cool feature: Highwire will create an instant index and show you the first 250 indexing terms. (Use the tab, Articles indexed by subject.)
- Citation maps are available for individual hits.

Other Highwire features and Highwire summation.

- Currency is excellent.
- Easy to download to EndNote or another citation manager.
- I did note an article available free elsewhere that wasn't identified as free.

I am going give Highwire high marks,
But remember, once again, you are
only searching PART of the
literature.

PubMed Central

www.pubmedcentral.nih.gov

- Free open-access online database of full-text biomedical and life sciences literature, developed by the U.S. National Library of Medicine.
- PMC provides a lot of information about what is available, and what is not. The Journal List tells you what is in PMC and what is available free.

PMC ~ Contents

- These numbers may be a little out of date:
 - 765,513 total items
 - 760,702 have free full text
 - 4,057 authors' manuscripts (each representing NIH-funded research)
- Articles date back to the mid- to late 1800s for some journals.

PMC will grow

- PMC is expected to grow rapidly due to the new policy to make all NIH-funded research freely available.
- Many publishers are working cooperatively to provide free access.
- The National Library of Medicine is digitizing early print issues of many journals.

Journals in PMC

- Although there are not yet a lot of journals in PMC, they tend to be respected, & frequently cited.
- All are peer-reviewed.
- Currency varies by journal. Some make articles available immediately, others delay release. Most provide free access within a year of publication.

Searching PMC

- Advanced Search looks like a PubMed screen, and searching is much like PubMed
- Full-text is searched by default, if you don't specify a field, although this isn't made very clear.
- PMC has very sophisticated search software—many options for limiting and filtering results are available under the Preview/Index tab.

Sample PMC search

- Enter three words: tuberculosis drug abuse
- PMC parses this as: ("tuberculosis" [MH] OR tuberculosis [Text Word]) AND ("substance-related disorders" [MH] OR drug abuse[Text Word])
- Not all PMC items have MeSH headings, btw, but items that are indexed in PubMed do.
- Nice job, PMC!

PMC Summation

- Great site for searching and discovery.
- Great site for finding free full-text
- All the utilities in PubMed are also available in PMC.
- But remember, you are only searching PART of the universe.

BIOMED CENTRAL

www.biomedcentral.com

- Smaller site, it hosts 164 journals.
- Many of these are new and many are published by BMC.
- Almost all are open access; all are full-text searchable and peer reviewed.
- Journals are listed by subject area as well as alphabetically.

Substance journals in BMC

- The two journals that SALIS members would be especially interested in are *Harm Reduction Journal* and *Substance Abuse Treatment, Prevention, and Policy*.
- Both are listed under the Subject Heading, Public Health.
- You can sign up for alerts from these two journals (or any others).

BMC Searching

- You have to register—a fairly painless process—unless you are at an institution that has registered.
- I recommend the advanced search—plenty of options for search and display.
- You have an option for boolean search or boolean editing of your search.
- You can easily download to EndNote, and you can store searches.

BMC summation

- A nice site, with high quality options for search, display, export, etc.
- Although you can search BioMed Central in PubMedCentral and Scirus, currency is naturally superior at the BMC home site.

PsycArticlesDirect

www.apa.org/psycarticles

- This is a very handy site for those without institutional access to PsycArticles.
- Covers about 50 journals, most from the American Psychological Association.
- Search and view abstracts at no charge; browse journal issues from 1894 forward, and book chapters from the last two years.
- Pay \$11.95 for each full-text article.
- You *cannot* export via email or EndNote.

ScienceDirect

www.sciencedirect.com

- This site covers almost all the journals from the publisher Elsevier.
- If you have institutional access to Elsevier journals this is a valuable site for full-text searching,
- But if you don't, you should probably use Scirus instead, as you will only be able to search bibliographic data—title, author, abstract—here (the one caveat being that Scirus is not as current as ScienceDirect).

Substance Journals in ScienceDirect

- Covers some important journals, including:
- Journal of Substance Abuse Treatment
- Drug and Alcohol Dependence
- Journal of Addictive Behaviors
- Journal of Substance Abuse

More on ScienceDirect

- It's huge.
- Almost 7.9 million articles as of 10/9/06
- And it searches the full-text extremely efficiently.
- Evidently it is updated constantly.
- A good site for those with access to full-text search here.

Other publishers' archives

- Springer is the next largest.
- Others include Blackwell Synergy, Oxford University Press, Taylor and Francis, and so on.
- But could possibly search all these sites??!!!!??

Whew!

- There is a *huge* amount of high-quality full-text searchable literature available.
- None of these sites will find everything. (Neither will the more traditional places to search, such as PubMed or PsycAbstracts.)
- Most of these sites offer search options besides full-text search.
- There are potentially lots of places to look, *too many*.
- This fragmentation and variety presents us with quite a challenge.
- As more is available, searching gets more time-consuming.
- And that's why SALIS is promoting development of a Combined Drug and Alcohol DataBase!

Not All Searches are Created Equal. Some Searches are More Equal Than Others.

Google Scholar <http://scholar.google.com>

Scirus <http://www.scirus.com>

Highwire <http://www.highwire.org>

PubMedCentral <http://www.pubmedcentral.nih.gov>

BioMed Central <http://www.biomedcentral.com>

PsycArticlesDirect <http://www.apa.org/psycarticles/>

Science Direct <http://www.sciencedirect.com/>

JAMA and other AMA Journals

<http://jama.ama-assn.org/>

Register as a guest, free access after 6 mo (or 12 mo for the Archives journals)

Two sites for finding free and Open Access journals:

<http://www.freemedicaljournals.com/>

<http://www.doaj.com>

Thank You.