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Information Quality Standards: Navigating the Seas of Misinformation *

Donna Scheeder

Director, Law Library Services

Law Library of Congress

Washington, D.C. USA

There is an information quality crisis. The information seeking behavior of clients and trends in publishing in both the private and public sectors, are just a few of the factors creating this crisis. Pick any public policy topic and you can find numerous recent examples of where journalists and decision makers have gotten publicly embarrassed or worse because they were duped by bogus information, a web scam, falsified research, an illicitly edited work, bad information in print, a hoax or other bad information in the news or unreliable or inaccurate sources. There is a sea of misinformation out there. This presents both a challenge and an opportunity for all librarians and for those who serve their parliaments and congresses in particular. This paper will take a look at these trends and their effects and then discuss strategies that can be used to add value to the information by insuring its authoritativeness, timeliness, and accuracy.

* Note. The opinions and ideas expressed in this paper are those of the author and are not to be attributed to the Law Library of Congress.

A 2005 report from the Economist Intelligence Unit declares, “Information is everywhere, but knowledge is hard to come by.”¹ This is a conclusion of a survey of a 122 executives from large corporations around Europe. These executives see “too much information and the fact that a lot of it isn’t accurate or reliable as two major impediments to effective decision making.” As Erik Nessheim stated in his address to the section last week, “there is no shortage of information. The problem is not sorting but evaluation. Quite a lot of time is wasted getting things on the internet.” For Parliamentary librarians whose mission is to provide high quality information to the members of parliaments, the situation described in this study is a call to action. How did we get to this point?

The pressures on Parliamentarians have increased as well, less time and increased accountability results in increased expectations. As Priscilla Baines, recently retired Director of the House of Commons Library so eloquently put it at last year’s conference, “By almost every measure, parliaments have become busier and the demands on their members correspondingly greater.”² She cited increased media attention, constituent demands, and lobbyist pressures as a few of the factors that have resulted in a greater demand on their part for tailored products and services. “Their expectations of the scale and scope of services that will be available to them are rising all the time.”

At the same time, **electronic resources have made it possible to make service accessible 24/7.** Anyone with internet access can get basic questions answered any time of the day or night themselves. User access is increasing and not only from their laptop. Blackberries are increasingly providing information content and are attractive to parliamentarians whose jobs tend to keep them on the go. Members and staff increasingly answer their own reference questions and don’t necessarily go to the parliamentary Library site to do it. This development also means increased competition from other information providers. Parliamentary libraries and research services are increasingly employing strategies to carve out a niche in order to compete. This paper will address how we can use the information quality crisis to our competitive advantage.

The availability of information increased exponentially but much of it is of dubious quality. The introduction of electronic information resources and the world-wide web has increased the availability of information. This increase in information has made it possible to answer questions that were unable to be answered in the print world. But while the volume of information continues to explode, quality, reliability, and authenticity of information increasingly comes into question. More information is not necessarily better information.

There are alarming examples everyday of bad and misleading information. Some of it comes from our governments and some of it appears in the news. Bogus websites are a particular concern. Chris Sherman, associate editor of SearchEngine Watch points out a key problem with the web, “it’s carelessly used as a primary source of information, when in fact it’s more often a secondary source. Someone reads an inaccurate statement on the web, quotes it on another web

¹ *Know how: Managing knowledge for competitive advantage.* The Economist Intelligence Unit 2005.

² *A combined parliamentary library and research services: changes and challenges over 30 years.* Proceedings of the World Library and Information Congress: 70th IFLA General Conference and Council. August, 2004.

page, search engines obligingly index all of the inaccurate pages, and we end up with a mess where fiction is accepted as reality.”³ In her book, *Web of Deception* editor Anne Mintz has collected a series of essays that discuss such serious problems as counterfeit websites and webcams. Websites are also susceptible to hacking. The September 18, 2001 issue of *Security News* reported that Yahoo News stories had been changed over a 2-month period by a hacker.⁴ It took 2 months for someone to catch on to this.

Websites themselves are not the only source of misinformation. There are documented incidents of falsified research. An Associated press article reported that scientific fraud was uncovered at Bell Labs in the form of articles published and patents submitted based on falsified research data. This tells us that scholarly publications are not immune to bad information. In addition, the sources and /or publishers of reports are often organizations with a particular point of view who are in the business of persuading others to adopt that. This is particularly true of trade organizations and interest groups. Trade organizations and consumer groups had each funded research to prove their positions resulting in conflicting and dubious data. While the information in the report may be accurate for that side of the story, the report itself may leave out critical information that might argue against their position. The public policy debate over the effects of tobacco use that took place in the United States is an excellent example of this.

New forms of communication means there is more information to evaluate. In addition to the proliferation of misinformation, new forms of publication and communication both simplify and complicate information gathering and dissemination. Also, some high quality information is ephemeral and at risk. The blogging phenomena is a good example. Blogging first spread as a way for anyone who has something to say about anything that crossed their mind, to easily make their thoughts available to anyone who cared to read them. As such, those in the information profession and the research world initially dismissed blogs as a publication medium. Since that initial dismissal however, we have seen blogs and blogging branch out into an efficient means of communicating and publishing serious content. For librarians like us who must build collections of public policy materials, blogs are an important potential source, both to alert us of new publications and available information and as a publishing means of original content. Consider this recent posting on the BeSpacific Blog, which identifies new information resources in the fields of law, technology, and government information policy. “New blog co-authored by Nobel Prize Winning Economist and federal circuit judges.” The introduction to the Becker-Posner blog states, “we have decided to start a blog that will explore current issues of economics, law and policy in a dialogic format.” The first posting is on preventive war. For any scholar who wants to write about the 2004 election in the U.S., some key developments took place on blogs and access to that original source material was important to those tracking the election and to those writing about it later. In addition, blogging is in use by more organizations themselves as a way to communicate with users, and/or employees. Blogs represent the full range of decisions involved in the digital life cycle and create a new series of problems for parliamentary research staff. As more public policy material is published in these types of born digital formats, librarians are challenged to build new forms of digital collections in order to preserve important material for future researchers and analysts. In

3 Sherman, Chris. “Web of Deception: Misinformation on the Internet.” October 16, 2002. SearchEngineWatch. <http://searchenginewatch.com/searchday/article.php/2160991>.

4 Poulson, Kevin. “Yahoo! News Hacked: Hacker tinkers with news articles detected.” September 18, 2001. Security Focus. <http://www.securityfocus.com/print/news/254>.

building these collections librarians must have standards to apply in order to separate the high quality content from the vanity bloggers.

But it is not enough to focus solely on text. As the use of webcasting as an information dissemination tool increases, it becomes increasingly difficult to obtain written transcripts. Scholarly material is in the form of the webcast only. This material will be lost if we do not consider acquiring and preserving it. The integration of a variety of digital formats into our libraries and our ability to develop policies and procedure to manage their digital life cycle is complicating the performance of our mission to serve our clients. The Law Library of Congress can provide an interesting example of how libraries can respond to these collecting challenges.

Currently, the Law Library of Congress is designing a web archive collection to document the nominations debate over the nominee for the next Supreme Court Justice. It involves developing a crawl list of websites where the curator believes important debates will take place that will effect the outcome. Because of the fleeting nature of some of this material, it will be acquired before it is evaluated. Unless action is taken now, much of this material will be lost to future generations of legal scholars and historians, as well as to our own attorney analysts who advise the Congress.

How then do librarians respond to these challenges? There are some key strategies that if employed, will not only offer a response, but by adding value will give parliamentary libraries a competitive advantage over other competing information providers.

1. Establish information quality standards for the information that we provide to our clients.
2. Publish these standards on our website as a way of clarifying for our decision makers the value they are receiving and of communicating what makes us different from other information providers.
3. Work together to agree on a set of shared information quality standards for our profession.
4. Work together to preserve important scholarly born digital material.

A major function of the information professional is the evaluation and selection of information resources. When evaluating information for use by decision makers what should we be looking at? Quality information is reliable. This means that it is:

- authoritative
- timely
- accurate
- objective
- tailored to the needs of the client.

How does one know when an information resource meets these criteria? There is a great deal of work that has been done in this area, particularly by type of information. A useful

compilation of work is presented in *The World-Wide Web Virtual library* section on information quality.⁵ Let's look at each of these individually.

Authoritative. The dictionary defines authoritative as official, reliable, because it is coming from one who is an expert or properly qualified. In her March, 2003 article, *Evaluating Quality on the Net*,⁶ Hope Tillman points out that there is a continuum of information on the net that is similar to that in print. This could be considered the context for the evaluation of authoritativeness. The continuum in the print world extends from vanity to scholarly specific. Certainly the forms of vanity publishing have proliferated on the net from individual homepages to blogs. The mere fact that something is self or vanity published however, does not necessarily mean that it is of little value. What it usually does mean however, is that it lacks peer or a form of editorial review. Within the continuum then, there are indicators that we use to evaluate the authoritativeness of a source.

The indicators of authoritativeness include the following:

1. Does it claim to be official?

When dealing with legal information this is a very important consideration as only official sources can be used for certain purposes such as testimony. When a website or a publication claims to be an official source, this claim is usually verifiable and it is our responsibility to obtain verification. The first thing to check is if they have a link that provides information about the website owner and their editorial policies. Checking the domain ownership, and learning how to identify website spoofing will also help in the application of this quality standard.

2. Is it a primary or secondary source?
Is it presenting original research or is it reporting or summarizing the work of others.

3. Qualifications of the author.

For individuals, what are their credentials? Can you find other material written by them? Are they cited by other reputable sources? For organizations, what are their accomplishments? Is there an "about us" on the website that provides verifiable information concerning their record in this field?

4. Documentation.

The U.C. Berkeley website⁷ offers the following advice. "A bibliography, along with footnotes, indicate the author has consulted other sources and serves to authenticate the information that he or she is presenting. In websites, expect links or footnotes

⁵ Smith, Alastair. "Evaluation of Information Sources." October 2003. Information Quality World-Wide Web Virtual Library.

http://www.vuw.ac.nz/staff/alastair_smith/evaln/evaln.htm

⁶ Tillman, Hope. "Evaluating Quality on the Net." March 2003. <http://www.hopetillman.com/findqual.html>.

⁷ U.C. Berkeley Library Guide. "Critical Evaluation of Resources." January 7, 2005. <http://www.lib.berkeley.edu/TeachingLib/Guides/Evaluation.html>.

documenting sources, and referring to additional resources and other viewpoints. Also, look at other sites that are linked to the one you are evaluating: How authoritative and credible do they appear to be?

Timeliness. Is the information up to date? You need to as a user establish the date of publication and as a publisher provide that date. Undated websites present a problem for those who are trying to evaluate the currency of the information. As website users, we need to know when websites were last updated and as website publishers we should be providing this information to our clients. Automatic scripting that results in today's date automatically appearing on a page makes this quality standard even more difficult to apply. Assess the writing for time sensitive information and be cautious of such words as recently, last week or month. Using this type of language and finding them in the material we select for clients creates confusion for the reader and masks information that has aged over time.

Accuracy. We want to provide information that is precise and free from mistakes and errors. Accuracy describes information that is factually irrefutable and complete. How do we assess that? Is the information from a source that is peer reviewed or fact checked? As publishers, what are we doing in the way of fact checking and verification? Verification is frequently a step that is skipped in today's rush to publish on the web.

When evaluating sources on the web there are many pitfalls to guard against including hoaxes, and technically corrupted data. The best approach to accuracy is verification. Can you find the same information in at least two sources? Is the source itself a primary or a secondary source?

Stephen Miller of the New York Times⁸ put it best when he stated in a piece introducing the Miller Internet data Integrity Scale, "while we are all caught up in terms like cyberspace and virtual reality; the reality is that real people not pixels created the information displayed on your computer screen. There are good people who tell you the truth. There are bad people who tell you lies. Just because it's digital doesn't make it true."

Objectivity. In the world of parliamentary libraries and research services, unbiased, objective information is a key information quality standard. When selecting articles and studies to provide to our members we are looking for acts and analyses that are presented in a balanced manner or persuasive writing that is clearly identified as such. When writing for our clients, we are always careful to present all sides of the issue. Websites that are sponsored by corporations or interest groups usually have a point of view. Advertising on a website may also provide clues regarding potential bias. Search engines exacerbate the problem by providing placement for a fee. The best way to ascertain a websites objectivity is to read its purpose statement. If it doesn't have a purpose site do some background research on the sponsor. If it doesn't say who the owner is don't use it.

Sometimes, presenting objective information means putting together a compilation of opinion pieces that we select because overall they represent a balanced presentation even though

8 M.I.D.I.S. (Miller Internet Data Integrity Scale). Stephen C. Miller. The New York Times. March, 2004.

individual items may in themselves be biased towards a certain viewpoint. Members want to track the opinions of constituents and interest groups. While the opinion pieces themselves may be biased, the breadth of the selection should be balanced.

Tailored to the clients needs. This criteria relates to relevance. Does it answer the question specifically? Is the context legislative or political? Is it fit for purpose? This is where the librarian needs to be critical of the academic approach to presenting information if it does not acknowledge the real world of the legislature. When we are linking to a source are we taking the user directly to the relevant piece of information rather than the front page of a website where they may be confronted with a search box. It is also good practice to provide some information about the links you provide so that the user can decide if it is relevant to their particular question. This criteria speaks directly to the needs of the member who is busy and stressed.

There are some good examples of published criteria that exist for specific disciplines. A number of discipline or subject specific quality standards already exist. *HealthRatings.org*⁹ issued a report on June 9, 2005 rating 20 health information sites. They evaluated websites according to transparency/accountability, editorial adequacy and information reliability. A look at the survey instrument provides a checklist similar to the ones we have already discussed, such as what is the purpose of the website and is it stated? Who is the audience and is the material relevant to them? Does it differentiate between editorial opinion and reports. The information must be authoritative which means for them that the information must be attributed to an author and their training in their field must be mentioned. The information must be documented. It is interesting to note that out of 20 reviewed, 6 received an excellent rating, 5 a very good, 8 good and one fair. For us as providers of information, these ratings are important considerations when choosing health websites as potential sources.

In the legal field, Maryland's People's Law Library¹⁰ offers assistance with criteria for evaluating legal websites. They recommend looking for these 10 signs of excellence in a legal website:

- Clear and complete information on the identity. The standard not only states that you should be able to find the identity of site sponsors and contributors but that addresses and phone numbers should also be provided as well.
- Visible material revision dates. When was the material last reviewed for legal accuracy? The standard cautions that this date should be different from that of the last technical changes to the site.
- Information about legal jurisdiction. This is a good example of a discipline specific criteria. It is an attempt to answer the question of relevancy. Laws vary from state to state and country to country. It is important to know what law is the basis for the content of the site.

⁹ Consumer Reports WebWatch and the Health Improvement Institute (HII). "Consumer Health WebWatch Rates 20 Health Information Sites." June 9, 2005. [HealthRatings.org](http://www.healthratings.org) and Consumer Reports WebWatch. <http://www.consumerwebwatch.org/dynamic/health-report-health-rating.cfm>.

¹⁰ "Legal Websites: Separating the "Good from the Bad and the Ugly."" October 18, 2003. Maryland's Peoples Law Library. <http://www.peoples-law.info/Home/PublicWeb>.

- Legal advice disclaimer. This is another discipline specific criteria. Unless it is the site of a law firm the information cannot be considered legal advice. If it is the site of a law firm it should tell the reader the terms and conditions of any advice that the website provides.
- Descriptive links to other websites. It is a good practice to describe the kind of material that is on the website and its relevance. Let the user know about the destination before they go. Don't make them have to find out for themselves.
- The source of law is noted. Helping the user to identify other relevant case law and information is a good practice in the legal field.
- Attorney and legal help referrals listed.
- Permission to publish other material is displayed. This refers to displaying information regarding permission to include material from other published sources. This would be particularly important in the legal world but should be a standard for all of us.
- Commercial activities. The People's Law Library criteria state, "a for profit website should tell you how it is supported. If the site charges a fee terms and conditions should be clearly displayed."
- If you enter information about yourself there should be a privacy statement.

While work on the identification of standards proceeds, it is important to realize that it is not enough to have standards. We must make our clients aware of them and demonstrate how they add value to our information and analytical products. I would dare to venture that many of us in this room use these criteria on a daily basis. I would also bet that very few, if any, have publicized to our clients, particularly on our website, that these are the standards we are using and that application of these to the information we select is what makes our website better than a random search on Google. We complain that our users are searching with our competitors tool, but we have foregone the opportunity of defining quality on our own sites.

Standards are not only an opportunity for us to add value as information providers however, but they also represent an opportunity for our profession to raise its visibility as the authority on information quality. Public opinion surveys in the United States indicate that libraries and librarians are currently trusted to be honest information brokers. Libraries and librarians need to guard that image by actively promoting information quality standards and by teaching information literacy concepts to their users. The best way to do this is by devoting some space in our digital 24/7 library to presenting the criteria we apply to our selection and maintenance decisions.

We can also raise our visibility through our professional associations working together. We could make a difference by setting information quality standards for application by our profession and by insuring that information professionals are well trained in this area.

This discussion has mainly focused on one portion of the digital life cycle, the selection criteria. In our digital world, our libraries and research services must demonstrate that we value the high quality information resources that we have selected and also produced. The next great challenge is preserving our resources, reports and records that in digital format for future users. The desire of our users for 24/7 access means that if it isn't digital it isn't accessible and yet as we digitize our collections and provide access to born digital resources, we must also join efforts to preserve digital materials in order to provide continued access. National libraries are working to develop the infrastructure and technology to do this. Parliamentary libraries and research services need to work with our national libraries in partnership on digital preservation issues.

If the digital revolution has brought a certain amount of chaos and anarchy, then it is within our power to bring some order and peace. Agreement on the standards for high quality information and a firm commitment to the preservation of that material will help restore some order to our digital library world.

Other Sources Consulted.

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