

# understanding HOW TO FIND VALID INFORMATION ONLINE



BY GEORGE LORENZO

published by

**UNDERSTANDING**  **YZ**™

Copyright © By George Lorenzo

Published and distributed online by Understanding XYZ. <http://www.understandingxyz.com>.

Cover Design: George Lorenzo  
Interior Design: George Lorenzo  
Graphic Images: 123rtf

All rights reserved. No part of this ebook may be reproduced by any mechanical, photographic or electronic process, or in the form of a phonographic recording; nor may it be stored in a retrieval system, transmitted, or otherwise be copied for public or private use - other than for "fair use" as brief quotations embodied in articles and reviews - without prior written permission of the publisher.



Understanding XYZ  
950 Hopkins Rd., Unit C  
Williamsville, NY 14221  
[www.understandingxyz.com](http://www.understandingxyz.com)

## CONTENTS

|   |    |
|---|----|
| Introduction and the Five Ws.....           | 4  |
| Navigating through the Noise.....           | 5  |
| 21st Century Literacy.....                  | 6  |
| Visual Literacy .....                       | 9  |
| New Media and the Participatory Web .....   | 9  |
| Opinion versus Facts versus Processes ..... | 12 |
| The Awareness Factor .....                  | 12 |
| Academic Libraries .....                    | 14 |
| Public Libraries.....                       | 15 |
| As We See More, Do We Learn More?.....      | 15 |
| What's Next?.....                           | 15 |
| Endnotes .....                              | 17 |

**We** are obviously living during an extraordinary time when information is so readily available and abundant over the Internet that it has become more difficult than ever to distinguish what information is valid and authoritative and what is not. Consequently, it's extremely important to follow some simple guidelines when searching for information online. Understanding how to find, analyze and share information – what librarians call “information literacy” is one of the most important skills, if not THE most important skill, anyone can have today. This ebook shows you exactly what you need to know in order to become an intelligent discoverer and user of online information.

If you do not want to read this entire, relatively short, ebook, at the very least I would advise you to understand and utilize the following rules of the road whenever you conduct a search for information online. By paying strict attention to the “Five Ws” below, you will immediately eliminate all the Internet charlatans from your search results.

Whenever I conduct an online search, especially if it's medical related, I utilize the journalism maxim commonly known as the Five Ws - Who, What, Where, When, Why, and How (the unnamed H) - to perform a pragmatic analysis of any information that has been published online. Websites that pass the Five Ws are usually trustworthy and credible. Here's how to apply the Five Ws to any website:

**Who:** Does the website name the people who run the operation you are accessing online and provide their bios, with photos and an overview, as well as links to downloadable files and/or web pages of past working experiences, credentials and/or client samples? Is it easy for visitors to discover who runs the business or organization and be able to contact that person or a representative? There are many websites that don't clearly reveal management, or these sites have an anonymous “contact-us” form that does not clearly identify who the form is actually being delivered to. This is one of the biggest credibility failures of many websites. If a website does not provide such information, it can easily be construed that its owners might not be credible. “Who” criteria should also include some kind of reliable information – be it a listing of academic credentials or special certifications - that supports the notion that the people in charge have the authority to present information that is credible and trustworthy. The “Who” criteria seems so simple and easy to understand, yet there are numerous websites that do not adequately explain who they are and what gives them the authority and knowledge to publish information.

**What:** A credible and trustworthy website should describe the nature of its business in easy-to-understand terms. The other part of “what” concerns quality of content and design. Is the content well written? Is the website graphically consistent and easy to navigate through? The Internet industry term for this is “usability.” The man known as “the king of usability” by Internet Magazine and “the guru of web page usability” by the New York Times, Jakob Nielsen, explained the irony of the web back in 2005 in a Business Week article, saying that, while the primary purpose of the web is to provide information, and yet, it is loaded with a enormous lack of information people really need as well as written in a poor, impenetrable style. <sup>1</sup> All you need in one search engine response to realize that this still holds true today.

**Where:** Something is definitely amiss if there are not working e-mail addresses, a real physical address of where the business/organization is located, and working telephone numbers listed in an easy-to-find spot on a website. Is the business located in Silicon Valley, Silicon Alley (the Manhattan version) or Bath, England? Are directions provided? Also, I am always suspect of a website that provides only a P.O. box for their physical address instead of their actual location. It tells me they do not want anyone to know where they are located. I can see using a P.O. box for a one-person business, such as an author, designer or consultant who works out of their home, but not for a bona-fide business with employees.

**When:** Today, especially when it comes to information about the Internet, World Wide Web, and communications and information technology, in general, timeliness is vital, as everything changes so quickly. At the same time, we web surfers often fall into the trap of depending too much on the very latest information out there, when, in fact, there's plenty of valid and important, but older, information available online about any given topic, dating back as far as the web will take you. Nonetheless, anything posted on a website should have some kind of time-stamp on it, so the reader understands the currency of the information being displayed and can then discern its applicability or non-applicability to the task at hand.

**Why:** What are the motives behind the website owner's content? Is it clearly spelled out that the purpose of the content is to sell you something? Is the cost clearly noted, or is that information buried someplace at the end of a shopping-cart function? Is the content geared toward providing information to its visitors in the spirit of sharing, or is there some other, not-so-evident, ulterior motive. How many times have you signed up for something only to find out that it was a free-trial that expires after a certain period of time at which point they will ask for your money to continue? This is flat out trickery and raises a red flag about a company's ethics. Also, never provide a credit card for the possibility of purchasing something down the road. Oftentimes, instructions for discontinuing your account are buried somewhere within a complex navigational structure, and by the time you have figured out how to cancel, they have already charged your credit card.

**How:** How was the information presented on the website discovered or created, and is it consistent with other information from other reliable sources? As an example, I recently had minor surgery and my doctor explained what to expect during my healing process. Turned out that I had a symptom of the surgery that he did not mention to me. This was alarming until I went online and discovered on several reputable websites, including WebMD and the Mayo Clinic, that my symptom was not unusual. Simple enough, but this is not typical. More often than not you will find conflicting information. When that happens the best you can do is judge how the information was presented. Did it pass the Five Ws? Was it written professionally and backed by citations to other literature?

So there you have it. By simply following the Five Ws you will see the number of your results dwindle down dramatically to only the key essentials.

But there is much more you should pay attention to when you are surfing. The rest of this ebook synthesizes many more aspects of information dissemination that everyone should pay closer attention to if only to ensure that the information they gather is not overly biased or tainted.

## Navigating Through the Noise

**Many** web surfers do not know how to navigate through all the noise in order to find authoritative and trustworthy information. Learning how to find and analyze the kind of information that can help us solve problems and challenges, answer our deepest questions, and perhaps bring about positive change in our culture and politics is what every web-savvy and responsible citizen needs to pursue more ardently than ever before.

As this ocean we call the web continues to expand ferociously into something we cannot predict, two elements of the web are certain: On the pessimistic side of life, there's a strong cross current that floats garbage, misinformation, and lies. And, on the optimistic side of life, there's another strong cross current containing gifts of knowledge, useful information, and the possibility for valuable interactive connectedness. Being able to find and consistently surf the latter cross current and stay balanced – and thus avoid the noise – is a skill-set that requires hard and patient work, good critical thinking and, to use a popular Beatles' phrase, "a little help from my friends."

How do we become skilled at finding, evaluating and using information? As lifelong citizens of the Information Age, the answer to this question grows in complexity every day. One of the reasons for this complexity is due to the two aforementioned cross currents playing out in numerous new and varied forms of information dissemination that change as quickly as they are born. We look at, and/or participate in, blogs, wikis, video logs, podcasts, discussion forums, social networks, social bookmarks, PowerPoints, webinars, instant messaging, text messaging, RSS feeds, citizen journalism, scholarly journals and abstracts, websites with reader-recommended news, new and rapidly growing forms of ubiquitous computing and a host of other portals to information and online communication tools. That set of encyclopedias that we learned how to trust not so long ago has crumbled into dust.

Peter Morville, an information architecture consultant for companies such as AT&T, IBM, Microsoft and Yahoo, and author of a really good book titled "Ambient Findability: What We Find Changes Who We Become," says we are going through a transition period, and it is anyone's best guess as to how long this transition will last.



“I think back when I was a kid and I had my single-volume encyclopedia,” Morville explains. “It was a wonderful resource, and it had a really nice feeling that if you had any question you could just look it up in your book. To some degree the whole traditional K-12 education system was oriented that way, with this notion of one authority and one history. I went through my education system with this idea that I was learning the one truth. Now many of us are in this period of transition where we are exposed to many different perspectives, many truths and many resources, so much so that it can feel overwhelming.”

So, what can we do about it? The straight-to-the-point and simple answer is to become information literate; in other words – as defined by the Association of College and Research Libraries (ACRL) – learn how to “recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information.”<sup>2</sup>

In addition to becoming information literate, we need to become visually literate, new-media literate, and information fluent - or to put everything under one banner, we can simply call it 21st Century literacy. Let’s take a deeper look at all of these, beginning with information literacy as it relates to search engine technologies and, more specifically, Google.

## 21<sup>st</sup> Century Literacy

**A** key word in the ACRL definition of information literacy is “evaluate.” To begin with, any good educator – including librarians who typically do not get the recognition they deserve for being educators – will explain that building a person’s ability to evaluate information entails addressing what it means to be a critical thinker. Applying this notion to the way in which we customarily search for information over the Internet brings us to the number-one search engine in the world, Google.

A good question to start with is have we become overly reliant on Google? Many academic librarians and others who analyze and report on search engine technology say that using Google as a primary source of information has major drawbacks and negative consequences. In short, the overuse of Google can decrease one’s ability to conduct valid, full-bodied and meaningful research.

Seth Maislin, an indexing and information architecture consultant, explains that, ironically, “the flaw lies in Google’s strength: social algorithms.” Maislin’s point is that Google’s page-ranking system is influenced by networks of links. It basically rewards those websites that have the largest number of other websites that link to them, regardless of the quality of content. Maislin, for instance, explains how, at one time, the Google search results for the word “Jew” typically resulted with the number one listing being a website known as JewWatch.com, which happened to be an offensive and inflammatory collection of anti-Semitic content. The problem has been fixed but that fact that it even happened makes us skeptical of Google’s ability to provide us with sound links to valid information.

Maislin also believes that Google’s advertising-revenue business model affects its search results in

interesting ways. For example, if the best, most authoritative and trustworthy search results came up on the first page, most people would not navigate any further through Google's results and hence not view as many Google advertisements. Basically, if the first-page results are less than ideal, users would be more likely to click on the next page and view more advertisements. "When you go to Google, what inspires you to keep clicking on the next page of results?" Maislin asks rhetorically. "Maximizing ad revenue is probably important to Google. If they put too many ads on the first page of their search results, people would leave. So what you are looking for is not perfection (in first-page search results); what you are looking for is something close to perfection" (so people will click through to the next page).



"Anyone conducting research who only goes to Google is not really thinking critically," adds Steven Bell, associate university librarian for research and instructional services for the Temple University Libraries. "They are just doing the easiest and most convenient thing that comes first in their mind. I don't mind them (higher education students) using any Internet search engine if they also plan out a strategy that involves two or three other databases within their discipline, or through something that is a general database that would give them multiple sources of information so they could assess and evaluate what they're finding through a form of triangulation."

Nonetheless, Bell adds that navigating through most academic library databases, for instance, is often a cumbersome and frustrating experience. Plus, when it comes to conducting research online in our rapidly changing digital world, student behaviors are changing dramatically. Today, many students typically give up the possibility of more fruitful research results if information isn't found instantaneously through one, simple Google-like search box.

Bell explains that part of his job is to change students' opinions about the difficulties and challenges often associated with online library research tools. "Currently, when they look at online library research tools, the first thing that comes to their minds is 'I don't need these. They are too complicated.' And we even see this in our own profession now, with librarians saying 'Well, library databases are too confusing. Students don't understand them,'" Bell explains. "And I agree, but sometimes you need to sit down and learn something. Physics is complicated, too, but if you want to be an engineer you are going to have to take the necessary time to learn about physics. That's all part of being a critical thinker." Bell adds that as faculty build more information literacy-oriented modules and exercises, by discipline, into their classroom instruction and homework assignments, "critical thinking will start to happen more naturally rather than being a forced behavior that we push on students."

I use library databases all the time, but I do agree with Bell and others that they are very complex and very often frustrating. Most online libraries have free online tutorials that will give you all kinds of valuable instruction about how to wade through their databases. They almost always have live chat services as well provided by experienced librarians. I have frequently used a helpful live chat to quickly find some information I needed for the books I write. Librarians are your friends. They are more than willing to help you find the right resources you might need for whatever it is that you may be seeking to understand better. Use them. (See information near the end about getting online access to library services.)

## Visual Literacy

Critical thinking also applies to the visual aspects of information literacy, especially since children are growing up with more visual stimulation from television shows and electronic learning and gaming environments than ever before. Unlike baby boomers, they are not text-centric, but instead image-centric in their consumption of information.

Susan Metros, University of California professor and dean, explains how “misrepresenting something visually or not understanding the power of visual images in anything you do can almost be life threatening now.” For example, Metros points to the infamous set of Danish caricatures depicting the Prophet Muhammad that set off worldwide protests and condemnations resulting in tragic violence and death. Indeed, the power of images can have enormous implications.

Being visually literate today means, in part, that we have an understanding of how images - both moving and still and ultimately published online - are created and manipulated. “We tend to think, if we see it, we believe it,” Metros says. “But your thirteen-year-old can manipulate images using Photoshop. And news organizations and big media frequently crop images to give us different perspectives. I have a wonderful image of George Bush meeting with the troops in Germany. It was on the front page of USA Today,” she adds, sardonically. “It was so obviously Photoshopped. Someone looked at the original photo and said, ‘Oh, we need an African American, an Asian and a woman (added to the troops in the background).’ You could see the feathering effect around the images, but there was nothing noted near the image that said it was a (fabricated) collage.”

## New Media and the Participatory Web

In addition to being information literate and visually literate, one needs to understand what’s happening in the so-called worlds of new media and the participatory web. New media takes into account all of the most recent information and communication technologies that are driving news and entertainment to our computers and mobile devices. The participatory web, which is part of today’s new media environment, is also referred to as “user-generated content,” “we media,” “social media,” the “democratized web” and a variety of other names.

According to Carleton College Cinema and Media Studies Department Professor John Schott, who has taught an innovative six-credit course titled “Participatory Media,” the participatory web



is where anyone can gather, produce and publish their knowledge about anything to the world through a wide variety of new media, such as weblogs, photo blogs, podcasts and video blogs (think YouTube). It is the ability to find, collect, archive, share and remix audio, video and images online in a new Do-It-Yourself (DIY) culture.

What are the new realities of the participatory web? There are two schools of thought. One is that the participatory web is like the

Tower of Babel and only adds to an already overabundance of irrelevant, hard-to-comprehend information published online. The other is that the participatory web has become the home for new individual voices and like-minded communities of interest that are catalyzing meaningful cultural and political change, with the same, or greater, level of credibility and importance as professional mass media.

Some of the literature about these two realities have strong voices. As early as 2006, for instance, Jaron Lanier, computer scientist and *Discover Magazine* columnist, referred to the participatory web, ala wikis and other forms of social networking, as a new kind of social collectivism driven by a hive mind that is dangerous, stupid, boring, and, at times, capable of lowering the overall expectations we hold for individual human intellects.<sup>3</sup>

Several months later, best-selling author Steven Johnson added his take on Lanier's point of view, when he wrote that:

A swarm of connected human beings is a fantastic resource for tracking down software bugs or discovering obscure gems on the web. But if you want to come up with a good idea, or a sophisticated argument, or a work of art, you are still better off going solo.<sup>4</sup>

Yale Law Professor Yochai Benkler wrote a 515-page book about the participatory web (and much more) titled "The Wealth of Networks: How Social Production Transforms Markets and Freedom." In a nutshell, Benkler asserted that we are in the midst of a new information age that has given us the freedom to actively participate in a networked information economy, i.e. the participatory web that is not motivated by financial profit or managed by an industrial complex.

This new freedom holds great practical promise: as a dimension of individual freedom; as a platform for better democratic participation; as a medium to foster a more critical and self-reflective culture; and, in an increasingly information-dependent global economy, as a mechanism to achieve improvements in human development everywhere.<sup>5</sup>

Nicholas Carr, former executive editor of the Harvard Business Review and best-selling author took issue with Benkler's point of view. "I think Benkler is absolutely right," he says. "Social production, voluntary labor and cooperation over the Internet is a very real phenomenon. Where I take issue with him is in his belief that this free social production exists outside of the market economy, that it is independent of managerial structures and independent of what he calls the pricing system. In fact I think that we are seeing social production – rather than being separate from the market system – is very much being incorporated into the market system, because companies are realizing that they can draw on this content that is being produced for free."

Carr elaborated, saying that Benkler's wealth of networks will ultimately become similar to how mass media has always worked. "The people who are able to produce the most valuable and most popular content are going to end up getting paid. Benkler's mistake is in trying to draw too clear a distinction between social production and market production. I think they are going to merge together into some kind of blend. His idea that there is some kind of purity in social production is not going to hold up."

Carr told me this in a telephone interview in 2006. His "blend" prediction has come true to a certain degree, especially when you see how the blogosphere has melded into news and other websites. For a good example of this see the Huffington Post (acquired by AOL in 2011), a successful and profitable publisher of news and opinion pieces.

These bloggers utilized by Huffington Post since it started are an important part of the site's credibility and trustworthiness. While these bloggers do not get paid, offering their services to the Post for free, they are vetted and pre-approved by Post editors. So, in effect, the Post is getting lots of free content from bloggers. What a smart business practice, indeed. However, upon closer look, blogger content is comprised of personal opinions and viewpoints that are important to the bloggers and typically not edited by professional journalists who have been trained in how to eliminate bias in articles. The bloggers do it for free to support whatever agendas they may have. Obviously these blogger stories cannot be interpreted as unbiased, well-researched journalism, because they are highly self-promotional in nature. Nonetheless, they do add value to the Post's bottom line revenues because people read these articles - and more readers ultimately equates to more paid advertisers.

In many respects I think it would be wise to ask if all these unpaid bloggers have contributed to the development of a smaller staff of journalism professionals, saving its owners plenty of money that could have gone toward hiring top-notch editors and writers schooled in the major tenets of true journalism ethics. It has certainly been a trend in the field.



According to an American Society of Newspapers Editors survey, the number of full-time newsroom jobs has slipped to its lowest level since it began counting in 1978. <sup>6</sup> Since the recession, the journalism workforce has been reduced by 20 percent. In addition to newsroom jobs, large-scale reductions have slapped down photojournalists, magazine writers and broadcasters across the country, according to the Pew Research Journalism Project.<sup>7</sup>

## Opinions versus Facts versus Processes

**I**t is important to understand that the content of blogs is mostly opinion. Using blog content as a valid and authoritative resource for whatever it is you may be researching is a slippery slope. It is not even close to the kind of valid and authoritative information you would get from let's say a well-researched academic paper or from a well-written, un-biased news or feature article put together by an ethical, professional journalists. Academic papers, do however, sometimes have their own set of issues. Oftentimes the survey information that academics use to prove various theories can be faulty, primarily because they might overuse students for their survey participants.

The same is true for all the talk radio and TV talk shows we see. I think we often forget how one-sided these shows really are. If you want very one-sided, pro-evangelical, strongly conservative, anti-Democratic views, go to the Rush Limbaugh website. If you want a liberal, pro-Democratic view go to Ed Schultz's website. The thing to remember is that both are one-sided views, not un-biased multi-sided views.

## The Awareness Factor

**S**o now that I have shown you at a very basic level what our online world of information has become and to a certain degree how it is evolving, let's take a look a closer look at what's really going on with the way information is presented to us today.

First of all, pretty much everything we see on television and in our newspapers and magazines is also accessible online, so the lines between television, hard-copy media and web-based information have blurred. Using that as my basis of investigation, let's start with the major television networks and how they present the news to us today. My first aim here is to simply make you more aware of how information is presented to us on a daily basis through our most popular resources.

Unfortunately, the major news media, in my opinion, is losing the integrity it once had. What we see coming out of the major networks on our television screens today is not a good picture of reality and what ought to be very important to us as citizens of the U.S. The influence of big business and big money on our news today has become a serious concern that is crying out to be hauled in, scrutinized and exposed by us, the citizens of the U.S.



best that can possibly lead you to more informative, valid and authoritative resources with not enough constraints. The reason for this is simple. Wikipedia is a resource that can be edited by unqualified individuals. I have edited Wikipedia posts myself, attempting to fix some of the inaccuracies I found there, only to see my edits removed by someone else who had access. Basically the message here is never rely on Wikipedia as a primary resource on anything.

In *Blur: How to Know What's True in the Age of Information Overload*, veteran journalists Bill Kovach and Tim Rosenstiel explain how online news places a premium on getting information out as quickly as possible. This speed factor, which is a ubiquitous marker of Digital Age reporting, is the enemy of accuracy, they say. Moreover, the extraordinary increase of information available online equals more dissonance in our lives. In their book they repeatedly stress how citizens need to enhance their online literacy skills through education.<sup>9</sup>

There are many more books out there about how to find valid and authoritative information on the web, but I have to say these two in particular are really the best I have had the pleasure to read, learn from. They have dramatically increased my awareness of how information gathering and publishing in the 21<sup>st</sup> century are changing. If you find the time to read these two books and perhaps some of the tutorials that libraries provide (see below), I think you will easily become an information literacy expert.

Unfortunately, the days of the trusted networks are long gone. I do believe, however, that people are becoming more cognizant of what's true and what is just flat out bull shit on the web. This is happening because, I believe, we are seeing so much of the bull shit that our bull shit detection meters have become trained to recognize it more easily.

## Academic Libraries

An interesting sidebar to all I have talked about thus far can be found at the world's greatest research libraries located at higher education institutions across the country. Academic libraries are the worker bees behind figuring out the best ways and methods for discovering and sharing intelligent, trustworthy information that is already published, or publishable, online. As the growth of mass digitization and new communications and information technologies continues unabated, we are seeing higher education library physical spaces change into socially interactive learning environments where books are not as prevalent as they have been in the past. Newly built libraries are not shelving as many books in their primary physical space as they have in the past, with vast quantities of their holdings being moved into off-campus high-density, retrievable storage facilities.

Libraries are essentially becoming people places that provide the tools, the services, the expertise to support learning and scholarship, but along with that, an environment for social interaction. Scholars can do their research and writing anywhere, yet ironically they are not going to the physical library any less frequently.<sup>10</sup> They go for help with using online resources and to interact with like-minded people, perhaps in the coffee shop, which are now typically located directly across from the academic library entrances.

## Public Libraries

In addition to academic libraries, most people are unaware of the vast amount of viable, authoritative and trustworthy online materials available for free through public libraries across the country. All you need is a library card. For example, as a citizen of the State of New York, I was able to get a library card and online access to numerous excellent web-based resources that are available at one of the most prestigious libraries in the world, the New York Public Library located in Manhattan. Check out your state library systems and you will be pleasantly surprised at what you can get at no cost via their online services.

In the spirit of education, here are a four reliable websites to consider (there are many more available at most online libraries):

- Purdue University Online Writing Lab - <https://owl.english.purdue.edu/owl/section/2/8/>
- Article about utilizing Google Scholar and scientific papers published in Scientific American - <http://blogs.scientificamerican.com/guest-blog/2011/07/16/finding-good-information-on-the-internet/>
- UC Berkeley tutorial - <http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/FindInfo.html>
- The Internet Public Library – <http://www.ipl.org/>

## As We See More, Do We Learn More?

The growth of citizen journalism, for instance, where anyone can take a photograph or video of the news, write about or broadcast what's going on as it occurs, and publish it online in a matter of minutes, has brought about a new information- and news-gathering experience that forces us to pay closer attention to our sources of information and ultimately choose the most trustworthy and authoritative among numerous options. A great example of some excellent citizen journalism can be found at Global Voices (one of my favorites) (<http://globalvoicesonline.org/>), where you will not get highly filtered news and opinions. There are many more of these as well, and they continue to pop up frequently, including CNN's ireport (<http://ireport.cnn.com/>), which is one of the earliest citizen journalism sources.

## What's Next?

To state the obvious, there are, indeed, numerous answers and tools available to us online. Overall, the World Wide Web is impossible to track effectively. It is loaded with hard-to-find authoritative and trustworthy content and packed with both stupidity and wisdom.

I have only scratched the surface of the web.

Other important elements and terminology related to the Internet, the web and today's Information Age to watch include net neutrality, mashups, mobile computing, social networking, cyberinfrastructure, web services, virtual worlds, grid computing, social networking and bookmarking, content aggregators, podcasting, RSS feeds and Ajax and Atom, bit torrent, Library 2.0 and now 3.0, the Long Tail, collaborative authorship, the Internet of Things, and much more. Plus, there are many other terms and topics of interest related to the information explosion spreading online that I have yet to discover or explore. Each day I am surprised by some new development or turn of events that looks to have the potential of bringing about dramatic change.

At the risk of sounding corny – “Surf's Up, Dude,” – let's ride the online knowledge wave, stay balanced, learn how to avoid nasty undertows, know where we are at all times and reach the shoreline safely so we can hop on the next wave.



## Endnotes

1. Bloomberg Business Week Magazine, *Jacob Nielsen on the Unwieldy Web*, September 2005, <http://www.businessweek.com/stories/2005-09-25/online-extra-jakob-nielsen-on-the-unwieldy-web>
2. Association for College & Research Libraries, *Information Literacy Standards for Higher Education*, <http://www.ala.org/acrl/standards/informationliteracycompetency#ildef>
3. Jaron Lanier, *Digital Maoism: The Hazards of the New Online Collectivism*, Edge, May, 30, 2006, [http://www.edge.org/3rd\\_culture/lanier06/lanier06\\_index.htm](http://www.edge.org/3rd_culture/lanier06/lanier06_index.htm)
4. Steven Johnson, *Digital Maoism*, The New York Times Magazine, 6th Annual Year in Ideas, December 10, 2006
5. Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom*, New Haven, London: Yale University Press, 2006
6. Mark Jurkowitz, *The Losses in Legacy*, Pew Research Journalism Project, March 26, 2014
7. Pew Research Journalism Project, <http://www.journalism.org/>
8. Sharyl Attkisson, *Stonewalled: My Fight for Truth against the Forces of Obstruction, Intimidation, and Harassment in Obama's Washington*, Harper Collins, 2014
9. Bill Kovach and Tim Rosenstiel, *Blur: How to Know What's True in the Age of Information Overload*, Bloomsbury USA, 2010
10. James J. Duderstadt, from *The Research Library in the 21st Century Symposium*, The University of Texas at Austin, University of Texas Libraries, September 11, 2006