

Punctuated Equilibrium: The Web Rocks Our World

We were tooling along quite nicely, thank you. We had our reference books, our card catalogs, and telephones. We could find almost any information that anyone needed in a fairly timely fashion. We knew our jobs and we did them *well*.

Then that cursed, blessed World Wide Web exploded all over us.

The Web revolution caught most librarians unawares. It just happened, and it happened *fast*. One minute, we were losing our sight on the tiny print of the huge, khaki-colored volumes of the *National Union Catalog*, and the next, we were developing carpal tunnel syndrome from clicking through the virtual stacks at the Library of Congress. In this characterization, I am ignoring those special librarians who went digital 20 years before the birth of the Web. Those law and business librarians have always been specialists in the arcane world of commercial online searching. For them, the advent of the Web was not a revolution. It was more like an upgrade.

The almost instantaneous materialization of the World Wide Web brings unexpected challenges to our library world. The first big problem is money. Computers cost a lot, and not just to buy them. There are plenty of hidden costs associated with public access computers, particularly in maintenance, staff time, and training. Worse, rapid technological advances make expensive computer hardware and software obsolete so fast that it might as well be disposable. Today's high tech is tomorrow's junk. We even have to budget for the cost of disposing of outmoded electronics safely, lest our machines convert to toxic waste.

At the same time (and this is problem number two), the Web is unnervingly compelling. I know that I can while away hours at a time on it, though I possess what passes in our society for mental health. Many among our library patrons claim no such blessing. Government cutbacks in mental health spending in the 1980s turned many public libraries into *de facto* day-care centers for the reality-challenged. The advent of public access to the Internet in the 1990s gave this population something to do all day. (Well, at least they are not hiding out in the stacks anymore.) The Web is addictive, even to those without obsessive-compulsive issues. Prying fixated patrons off the Internet after only one hour is like cutting off alcoholics after a couple of drinks. It's likely to make them very cranky, if not downright pugilistic. As much as we hate it, it seems true: Librarians have become the bartenders of the World Wide Web.

That brings us to problem number three: control. We librarians tend to be control freaks. This is considered a virtue in the library world. Control, after all, is the basis of organization, the foundation of access. It allows us to store information so that we can quickly put our hands on it again.

Unfortunately, we librarians often feel compelled to control everything that goes on within our walls. This includes deciding who may use our computers to access the Web, how long they may use them, and what they may view. We can claim reasonable adherence to community standards to account for some of this compulsion. We don't want to be accused of running some taxpayer-supported porn palace, after all. Still, I suspect that we are also moved by a deep belief that we haven't gone to all this trouble to provide public access to the Internet just so our patrons can play around. We want our users to appreciate our efforts on their behalf, to acknowledge our *pain*—by using our computers to better their lives and their minds. When we perceive our patrons wasting or trivializing or abusing the

resource that we worked so hard to give them, we feel a touch of outrage—*moral outrage*.

I'm not saying that we *should* feel that way. After all, Constitutionally speaking, we don't have the right to decide what our adult patrons see. Still, many of us feel profoundly offended by the anarchy of the World Wide Web. We resent our inability to catalog the Web's ever-changing contents. We can't even search the dang thing with any kind of precision. It goes against everything that we, as librarians, believe and work toward. No wonder we get so frustrated by issues surrounding Internet access!

On the other hand, the Web does great service to us and to our patrons. It can even save lives. I can personally attest to that. When a beloved friend became very ill, I used the Web to find an experimental treatment for him. The treatment succeeded, and my friend is well today, in spite of the death sentence passed on him by a cost-conscious HMO.

Yes, I have seen the Web work magic: for the school kid with a report due tomorrow who needs a copy of that famous short story nowhere on the shelves, for the investor who desires the closing price of a stock from six years ago, for the taxpayer who has to have a copy of an obscure publication from the IRS, and for those trying to understand the terrorist attacks of September 2001. Small miracles, yes, but worthwhile—and utterly unthinkable before the advent of the Web.

Of course, all this new work we do requires computers, devices for which librarians are not known to possess a natural affinity. Many librarians, including me, never dreamed of delving into the arcane intricacies of these machines. Yet, we often turn out to be quite good with computers and the Internet. As people who like to organize information, we are accustomed to visualizing abstract concepts, forming and analyzing mental models of complicated systems. Using this ability, we can see the big picture and sense patterns in how material should be collected and categorized for easy retrieval.

As it is in cataloging, so it goes with the Web. As trained information professionals, we can visualize the shape of information on the Internet in our mind's eye, and that picture helps us to decide where to search and how to evaluate what we find. This talent comes in handy when fixing hardware, too. Sometimes we can look at a computer glitch and sense the shape of what has gone wrong. It's not a matter of precision so much as instinct, exploration, and a willingness to push all the buttons until something works. In the Humanities, serendipity is recognized as a legitimate tool. It works on the Web, too. "Playing around," aka exploration and practice, is the path to mastery for both Internet searching and computer repair.

We librarians may feel timid around computers. But here's a secret: It is really hard to *break* them. The library database and Web servers are off limits, of course. Yet, as far as PC and Mac workstations go, professionals and patrons alike can feel free to explore them to their hearts' content. As long as users back up their data, they can't really cause too much damage. And if a machine ever does get really messed up, its memory can be wiped and the system can start over with a clean hard drive.

That's easy for me to say. I know that we librarians don't have that kind of time to waste. That is where I hope this guide will come in handy. My mission? To offer you, in an easily digestible format, some of the lessons I have learned using the Web at work and at play.

I was fortunate to go through the library program at the University of California at Los Angeles just at the time that the graphical Web was coalescing, that is, from 1993 to 1995. Although our course work largely ignored the emerging Web, my internship at the Getty Research Institute plunged me deep into its mysteries. My only job, in that summer of 1994, was to sit in front of a computer for 15 hours a week to play with the baby World Wide Web so I could later teach it to the librarians there. After I graduated, I put

my Web experience to work as a "cybrarian" at the Leavey undergraduate library at the University of Southern California. And now, I rely on the Internet to get me through every reference day here at the San Marino Public Library.

I have divided this book into two parts. In the first and largest section, I cover reference resources that my patrons and I have found most valuable. In the second part, I examine skills, sites, and techniques that can help librarians cope with new responsibilities in maintaining computers and Web pages. I also explore how we can all keep up with the ever-changing World Wide Web. (First, the Web expanded exponentially. And now, with the decimation of the dot-coms, big chunks of it seem to simply disappear!)

I do not address the tough issues that librarians must decide for themselves, with input from their communities and system administrators. These include funding for Internet access, acceptable use policies, system security, printing options, multimedia use in the library, Internet privacy, and pornography. There are no universal "right" ways to manage these challenges. Often, the best way is to craft admittedly imperfect policies, compromises that seem the least "wrong" for a community culture.

The late Harvard paleontologist Stephen Jay Gould and Niles Eldredge, curator at the American Museum of Natural History, have hypothesized that evolutionary change does not happen gradually, but rather suddenly, in immense spurts after long periods of stasis. They call this phenomenon "punctuated equilibrium" ("Punctuated Equilibrium: An Alternative to Phyletic Gradualism," in *Models in Paleobiology*, edited by Thomas J. M. Schopf, 1972). That seems to describe pretty well what happened in our library universe when the Web spontaneously generated and revolutionized the way we do business. Despite the Web's drawbacks, we reference librarians can learn to harness this new force of nature to increase the true source of our value: helping our patrons to fill their information needs.