



How We Really Use the Web

Scanning, satisficing, and muddling through

By Steve Krug

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In the past ten years I've spent a lot of time watching people use the web, and the thing that has struck me most is the difference between how we think people use web sites and how they actually use them.

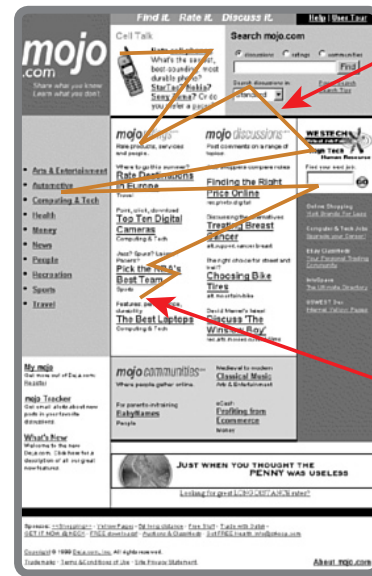
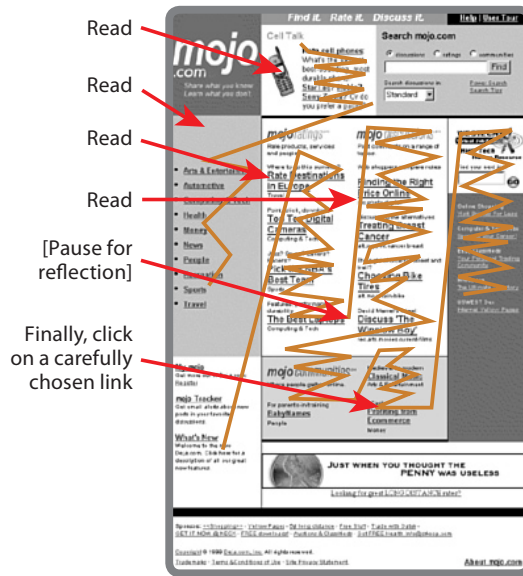
When we're creating sites, we act as though people are going to pore over each page, reading our finely crafted text, figuring out how we've organized things, and weighing their options before deciding which link to click.

What they actually do most of the time (if we're lucky) is *glance* at each new page, scan some of the text, and click on the first link that catches their interest or vaguely resembles the thing they're looking for. There are usually large parts of the page that they don't even look at.

We're thinking "great literature" (or at least "product brochure"), while the user's reality is much closer to "billboard going by at 60 miles an hour."

What We Design For...

The Reality...



Why are things always in the last place you look for them?
Because you stop looking when you find them.

— children's riddle

As you might imagine, it's a little more complicated than this, and it depends on the kind of page, what the user is trying to do, how much of a hurry she's in, and so on. But this simplistic view is much closer to reality than most of us imagine.

It makes sense that we picture a more rational, attentive user when we're designing pages. It's only natural to assume that everyone uses the web the same way we do, and—like everyone else—we tend to think that our own behavior is much more orderly and sensible than it really is. If you want to design effective web pages, though, you have to learn to live with three facts about real-world web use.



FACT OF LIFE # 1:

We don't read pages. We scan them.

One of the very few well-documented facts about web use is that people tend to spend very little time *reading* most web pages (See Jakob Nielsen's October 1997 Alertbox column, "[How Users Read on the Web](#)"). Instead, we scan (or skim) them, looking for words or phrases that catch our eye. The exception, of course, is pages that contain documents like news stories, reports, or product descriptions. But even then, if the document is longer than a few paragraphs, we're likely to print it out because it's easier and faster to read on paper than on a screen.

Why do we scan?

- **We're usually in a hurry.** Much of our web use is motivated by the desire to save time. As a result, web users tend to act like sharks: They have to keep moving, or they'll die. We just don't have the time to read any more than necessary.
- **We know we don't need to read every thing.** On most pages, we're really only interested in a fraction of what's on the page. We're just looking for the bits that match our interests or the task at hand, and the rest of it is irrelevant. Scanning is how we find the relevant bits.
- **We're good at it.** We've been scanning newspapers, magazines, and books all our lives to find the parts we're interested in, and we know that it works.

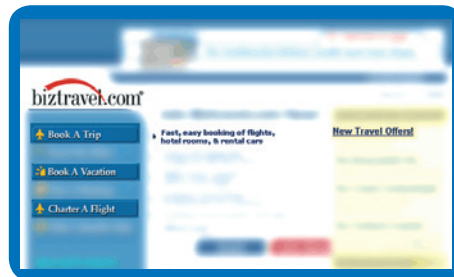
The net effect is a lot like Gary Larson's classic Far Side cartoon about the difference between what we say to dogs and what they hear. In the cartoon, the dog (named Ginger) appears to be listening intently as her owner gives her a serious talking-to about staying out of the garbage. But from the dog's point of view, all he's saying is "blah blah GINGER blah blah blah blah GINGER blah blah blah."

What we see when we look at a web page depends on what we have in mind, but it's usually just a fraction of what's on the page.

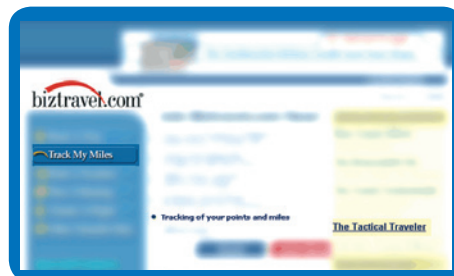
What Designers Build...



What Users See...



I want to buy a ticket.



How do I check my frequent flyer miles?

Like Ginger, we tend to focus on words and phrases that seem to match (a) the task at hand or (b) our current or ongoing personal interests. And of course, (c) the trigger words that are hardwired into our nervous systems, like "Free," "Sale," and "Sex," and our own name.

FACT OF LIFE # 2:

We don't make optimal choices. We satisfice.

When we're designing pages, we tend to assume that users will scan the page, consider all of the available options, and choose the best one. In reality, though, most of the time we don't choose the best option—we choose the first reasonable option, a strategy known as satisficing. (Economist **Herbert Simon** coined the term—a cross between satisfying and sufficing—in *Models of Man: Social and Rational*.) As soon as we find a link that seems like it might lead to what we're looking for, there's a very good chance that we'll click it.

I'd observed this behavior for years, but its significance wasn't really clear to me until I read Gary Klein's book *Sources of Power: How People Make Decisions*. Klein has spent many years studying naturalistic decision making: how people like firefighters, pilots, chessmasters, and nuclear power plant operators make high-stakes decisions in real settings with time pressure, vague goals, limited information, and changing conditions.

Klein's team of observers went into their first study (of field commanders at fire scenes) with the generally accepted model of rational decision making: Faced with a problem, a person gathers information, identifies the possible solutions, and chooses the best one. They started with the hypothesis that because of the high stakes and extreme time pressure, fire captains would be able to compare only two options, an assumption they thought was conservative.

As it turned out, the fire commanders didn't compare any options. They took the first reasonable plan that came to mind and did a quick mental test for problems. If they didn't find any, they had their plan of action.

So why don't web users look for the best choice?

- **We're usually in a hurry.** And as Klein points out, "Optimizing is hard, and it takes a long time. Satisficing is more efficient."
- **There's not much of a penalty for guessing wrong.** Unlike firefighting, the penalty for guessing wrong on a web site is usually only a click or two of the Back button, making satisficing an effective strategy. (The Back button is the most-used feature of web browsers.)

Of course, this assumes that pages load quickly; when they don't, we have to make our choices more carefully — just one of the many reasons why most web users don't like slow-loading pages.

- **Weighing options may not improve our chances.** On poorly designed sites, putting effort into making the best choice doesn't really help. You're usually better off going with your first guess and using the Back button if it doesn't work out.
- **Guessing is more fun.** It's less work than weighing options, and if you guess right, it's faster. And it introduces an element of chance — the pleasant possibility of running into something surprising and good.

Of course, this is not to say that users never weigh options before they click. It depends on things like their frame of mind, how pressed they are for time, and how much confidence they have in the site.

FACT OF LIFE # 3:

We don't figure out how things work.

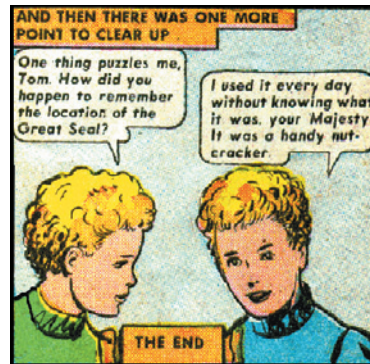
We muddle through.

One of the things that becomes obvious as soon as you do any usability testing—whether you're testing web sites, software, or household appliances—is the extent to which people use things all the time without understanding how they work, or with completely wrong-headed ideas about how they work.

Faced with any sort of technology, very few people take the time to read instructions. Instead, we forge ahead and muddle through, making up our own vaguely plausible stories about what we're doing and why it works.

It often reminds me of the scene at the end of *The Prince and the Pauper* where the real prince discovers that the look-alike pauper has been using the Great Seal of England as a nutcracker in his absence. (It makes perfect sense—to him, the seal is just this great big, heavy chunk of metal.)

And the fact is, we get things done that way. I've seen lots of people use software and web sites effectively in ways that are nothing like what the designers intended.



My favorite example is the people (and I've seen at least a dozen of them myself during user tests) who will type a site's entire URL in the Yahoo search box every time they want to go there—not just to find the site for the first time, but every time they want to go there, sometimes several times a day. If you ask them about it, it becomes clear that some of them think that Yahoo is the Internet, and that this is the way you use it. (In the same vein, I've encountered many AOL users who clearly think that AOL is the Internet—good news for Yahoo and AOL.)



Most web designers would be shocked if they knew how many people type URLs in Yahoo's search box.

And muddling through is not limited to beginners. Even technically savvy users often have surprising gaps in their understanding of how things work. (I wouldn't be surprised if even Bill Gates has some bits of technology in his life that he uses by muddling through.)

Why does this happen?

- **It's not important to us.** For most of us, it doesn't matter to us whether we understand how things work, as long as we can use them. It's not for lack of intelligence, but for lack of caring. In the great scheme of things, it's just not important to us. (Web developers often have a particularly hard time understanding—or even believing—that people might feel this way, since they themselves are usually keenly interested in how things work.)
- **If we find something that works, we stick to it.** Once we find something that works—no matter how badly—we tend not to look for a better way. We'll use a better way if we stumble across one, but we seldom look for one.

It's always interesting to watch web designers and developers observe their first usability test. The first time they see a user click on something completely inappropriate, they're surprised. (For instance, when the user ignores a nice big fat "Software" button in the navigation bar, saying something like, "Well, I'm looking for software, so I guess I'd click here on 'Cheap Stuff' because cheap is always good.") The user may even find what he's looking for eventually, but by then the people watching don't know whether to be happy or not.

The second time it happens, they're yelling "Just click on 'Software'!" The third time, you can see them thinking: "Why are we even bothering?"

And it's a good question: If people manage to muddle through so much, does it really matter whether they "get it"? The answer is that it matters a great deal because while muddling through may work sometimes, it tends to be inefficient and error-prone.

On the other hand, if users "get it":

- There's a much better chance that they'll find what they're looking for, which is good for them and for you.
- There's a better chance that they'll understand the full range of what your site has to offer—not just the parts that they stumble across.
- You have a better chance of steering them to the parts of your site that you want them to see.
- They'll feel smarter and more in control when they're using your site, which will bring them back. You can get away with a site that people muddle through only until someone builds one down the street that makes them feel smart.

If life gives you lemons...

By now you maybe thinking (given this less than rosy picture of the web audience and how they use the web), "Why don't I just get a job at the local 7-11? At least there my efforts *might* be appreciated."

What's a girl to do?

I think the answer is simple: if your audience is going to act like you're designing billboards, then design great billboards.

ABOUT THE AUTHOR

After a decade writing computer manuals, in 1989 Steve Krug moved up the food chain to usability testing and interface design so he could fix the problems instead of explaining them. Since then, he's evaluated and improved interfaces for a wide variety of clients, primarily in online services and the web, including Apple, AOL, Netscape, the late, lamented Excite@Home, BarnesandNoble.com, Lexus.com, and Circle.com (originally Interactive Bureau).

Adapted from Don't Make Me Think, Second Edition: A Common Sense Approach to Web Usability by Steve Krug. Copyright © 2006. Used with permission of Pearson Education, Inc. and New Riders.

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Printed in the USA 1/06

