Bloggers vs. "AOL Users": A Digital Divide Of Use And Literacy

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Abstract
Ethnomethodology suggests that paying attention to errors yields insight into everyday behavior patterns missed by other analyses. This paper presents data from a research project using grounded ethnographic and linguistic analysis to understand blog comment threads where blogging "natives" -- bloggers and their readers -- identify "strangers'" comments as errors. Through this analysis, a previously unrecognized digital divide becomes visible. Strangers lack natives' understanding of the Internet's structure. Their references to online literacy elements also differ. Taking the demographics of natives and strangers into account, gender appears to be a factor in this divide. Affirming recent suggestions that digital divide studies should transition to a focus on usage patterns and quality, not access quantity, this study suggests digital literacy education should focus more intently on domain name comprehension and other literacies specific to new text forms.

1. Introduction
It has been suggested by a number of studies that the digital divide is less and less shaped by whether people have access to computers or the Internet, and is increasingly shaped by other factors. [4,5,16,22] DiMaggio and Hargittai insist researchers should attend to differences between Internet users, and the social bases of those differences, rather than differences between those who have the Internet and those who do not. [3] They suggest that the skills people bring to the Internet, as well as the purposes to which they put the technology, contribute more to social rifts than access.

Among the factors DiMaggio and Hargittai cite as important to equality are the ability to critically evaluate pages found on the Internet, an understanding of how Internet software works, and alignment with corporate and governmental regulatory decisions shaping the Internet. Leu, in the educational field of New Literacy Studies, draws similar conclusions. [14] Research on literacy online has provided insight into differences in software competence and critical evaluation skills. The key observation of the New Literacies scholars has been that, despite the assumptions of traditional literacy education, "literacy" has never been a universally uniform practice; different groups use writing for different purposes, and online literacies are no exception. Dominant groups give preferential treatment to some kinds of literacy and not others. Street notes that using literacy practices divergent from those preferred by the government, industry, or schools may impact employment prospects, and may even disrupt government-sponsored literacy instruction programs. [21]

Internet users' social standing is intertwined with the sites they use, how they use them, and non-digital institutions to which these sites are tied. danah boyd has investigated how teenagers' use of Facebook and MySpace was shaped by college attendance patterns. Initially, Facebook was only available to students with a .edu email address from a college or university. boyd found that teens with siblings in college, or who aspired to go to college themselves, were thus more involved in Facebook than teens from less-educated families. Having a Facebook account became a status symbol equated with higher education. By contrast, MySpace was first adopted by musicians and artists in urban areas, lending their own forms of cachet to that site. While the design and features of each site -- sober and simple on Facebook, customizeably eclectic on MySpace -- play off the preferences of each group, the technology itself does not shape traffic patterns. Rather, designers' decisions shaped these cybersegments: permitting access to anyone, or only to those in the .edu domain. [2]

Sassen and Lessig, like DiMaggio and Hargittai, also discuss regulatory decisions' role in shaping Internet use. Popular and scholarly discourse about the Internet was initially very optimistic about the medium's democratic possibilities. Sassen and Lessig, in rebuttal, described technologies which can enforce social disparities -- like "zoning" of different kinds of sites, and identity certification -- under government and corporate regulation. [19, 13]
Online zoning may thus be promoting "cybersegmentations" -- a proliferation of mini-Digital-Divides independent of access issues. "Mediating cultures" and practices shape Internet use and understandings of digital space, "inflected by the values, cultures, power systems, and institutions within which it is embedded." [19, 20]

This study describes the cultures, values, and power systems at play in the cybersegmentation of one particular online practice: blog discussions. While blogs are the main focus of the study, the actions of Internet governing bodies (such as InterNIC), search engines, the portals of ISPs (such as AOL), and even television broadcasters also turn out to have a strong impact on how participants view each others' online writing.

In this study of 39 blog comment threads, more- and less-technically-savvy users identify each other as having distinct skill sets, evaluation criteria, and website affinities. Contesting the purpose of discussion threads, "natives" (bloggers and their readers) and "strangers" identify a divide between them. Natives label strangers as "illiterate." Two distinct literacy practices are defined, with one seen as inferior.

This study's approach to the digital divide is unique in that it does not seek differences between Internet users based on their demographic background. Rather, it comes at the divide from the other way around: beginning with an interest in differences which arise natively on the Internet, and then inquiring whether those appeared to be linked to other social differences. As such, this study is ethnographic and ethnomethodological, favoring interpretation of real events over scientifically-controlled interventions.

2. Methods

Ethnographic, ethnomethodological, conversational, and linguistic analysis were the main methods of analysis in this project. Ethnomethodology and conversational analysis study how local actors maintain social order in real-life, non-controlled settings. [6, 9]. As a result, identification and correction of "errors" by participants in these blog threads was the main criteria for choosing threads for this study.

A basic pattern had to appear somewhere within a blog comment thread for it to be included:

1) The blogger (a "native") wrote a post; e.g.:

   When I went to New York a couple years back, I went to see Maury live. As you can imagine, it was quite an experience.

   or

2) At least one commenter (a "stranger") arrived and misunderstood the original post:

   Maury,
   I was so impressed with what you did for the little girl with the club feet and hands, how you got a wheelchair van, and computer for her....

   or

   i wnt my aol account cancelled completely [...] cancel mny account, not just a new screen name

3) The blogger or a reader ("natives") returned and attempted, in writing on that same page, to correct the perceived error in the stranger's turn:

   FOLKS, PLEASE...
   Maury has nothing to do with this page and he will never, ever read this page. Trust me.

   or

   by the way people, this is not where you go to cancel any kind of account. Please try elsewhere

The second step, where strangers appear on a comment thread and say something "inappropriate," clearly involves some misunderstanding of the purpose of the blog thread, and also the results from the search engine which brought them to the page. Initially, this study began as a project to study how strangers were using search engines. However, it soon became clear that a great deal of information about how strangers (mis)understand the webpages they searched for was available from the blog comments themselves. Thus, this study's focus was narrowed to a textual analysis of the threads.

Threads to study were gathered by snowball sample. A number were culled from three threads on the community portal MetaFilter which discussed such misunderstandings. MetaFilter readers introduced initial examples, discussed similar threads, and added others they had found. Generally, I followed any link out from these pages which led to a similar error and discussion (delving into archive.org’s Wayback Machine when pages were no longer online), and found new threads in the process. I also followed up with readers who commented on the MetaFilter threads, soliciting more examples. I asked bloggers I met in person whether their blogs had seen errors like these. Finally, I also included a thread from my own blog, which fit these criteria (and was part of the impetus for starting this study).

Only blog comment threads were considered for this analysis. Examples of forums, news portals, and other genres of site were initially considered for this study -- five were found through the snowball sample.
-- but were eventually excluded for the sake of clarifying the study's focus.

Through these methods I identified 39 comment threads from 23 different blogs.

An additional 17 similar threads were found through the snowball sample. However, 13 of these were not included because no native responded to the strangers, thus failing to meet the third step in the conversation pattern required for analysis; these had generally been recommended for the study by users of MetaFilter or were linked from the original threads as being similar to the corpus. Two more were disincluded because while natives responded to strangers, they only mocked them based on their attitude toward the content of the website, not their approach to reading the website. Finally, one thread was not included because its topic (computer programming) was not transparent to a general audience; another thread was predominantly not conducted in English.

The 39 threads included in the corpus contained a total of 3,572 unique comments. The number of comments on each thread ranged from two on the shortest thread through 713 on the longest.

Generally, each thread stuck to a single discussion topic. Despite natives' attempts to define a thread's purpose, the topic was usually ultimately set by strangers. Topics fell into one of a few categories:

1. Attempt to contact a celebrity/TV show/movie (e.g. Bill Gates; talk show hosts Maury Povich and Oprah Winfrey; TV show Overhaul; Harry Potter casting agents; etc. 20 threads)
2. Request for assistance with technology or cancelling an account ("cancelling Google," AOL, EFax; 5 threads)
3. Job/scholarship search (attempts to contact architect Santiago Calatrava, Bill Gates; this overlapped with celebrity theme; 4 threads)
4. Shopping, sales, purchases (Barbie dolls, "Hoppity Hop" toy, custom M&Ms; 6 threads)
5. Folklore (riddles and chain letters; 2 threads)
6. Other general information (insects, speech impediment; overlapped with shopping theme; 4 threads)

Once the corpus was collected, I coded comments using Atlas.TI, a qualitative analysis software package.[1] Comments were given uniform codes for demographics; speech functions, specifically those described in Roman Jakobson's "Metalanguage as Linguistic Problem;" literacy patterns such as postal forms of address and URLs; and other themes following grounded theory's observation that analytic categories arise from patterns in what subjects say themselves. [8]

Data visualization techniques helped identify trends in particular phrases and words used repeatedly. To visualize data, I made use of IBM's Many Eyes tools. [17]

Using the term "natives," I am only obliquely referring to the term "digital native" coined by Marc Prensky. [18] I do not mean to imply, as he does, that "natives" are younger or of a different generation than my "strangers" or his "digital immigrants," that cannot be inferred from my data. Rather, the term seemed appropriate to simultaneously refer to bloggers and commenters who agree with bloggers' understanding of their original post's meaning; they defend the blogs as "their own," and try to drive strangers off them. Some natives are regular readers of the blogs in question; some appear to have arrived at the blog once the misunderstanding thread "went viral" as a humorous piece, through an aggregator site such as Digg or MetaFilter.

Identifying "natives" and "strangers" was not entirely cut-and-dried. For the most part, it was clear who agreed with the blogger's stance on the topic, and who was misunderstanding. However, there were commenters who did not clearly take either stance: they commented on the proceedings, but did not take a stance on the presence or absence of a celebrity, for example, or they introduced total non-sequiturs. Ambiguous comments were coded as "reader status unclear," and these were not included in analyses of comments from strangers and natives.

Apparent commenter demographics were coded where the commenter had provided such information. Gender was coded where the name, handle, or email address given by the commenter suggested it (for example, "pinkygirl_581@hotmail.com" was coded as female, while "manstraw" was coded as male). Of course, this is only represented gender; this being the Internet, it is generally hard to verify the gender of a poster. The exception was the gender of bloggers; this was triangulated from the "about" pages of the blogs, and is assumed to be more accurate than the gender of strangers and native readers. Gender of commenters was otherwise taken at face value.

The exception was comments which were clearly made in jest; joking comments were only considered as such, and were not taken into account in analyses of “serious” comments, including demographics and other major counts.
Commenters sporadically mentioned other information, including street address, nationality, and age; these were also coded. Geographic data was taken only when commenters gave it, and as a result is incomplete; only 350, slightly less than ten percent, of comments included this information. This data was generally not taken from commenters’ email addresses or URLs, except in the case of country-code-specific addresses (hotmail.co.uk, for example).

Repeat commenters were noted, to make a rough count of unique participants. Because there is no guarantee commenters did not use others’ nicknames (and there were a few clear times when they did), all counts must be taken with a grain of salt.

3. Demographics, Imagined
Demographics, and the Gender Gap

While numbers from a snowball sample study cannot provide reasonable estimates of a phenomenon's significance, descriptive statistics can still shed some light on the data. Table 1 shows the gender breakdown of commenters in these threads. (Comments from bloggers are not included.)

<table>
<thead>
<tr>
<th>Commenter type</th>
<th>Male</th>
<th>Female</th>
<th>Gender Unclear</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strangers</td>
<td>312</td>
<td>834</td>
<td>208</td>
<td>1354</td>
</tr>
<tr>
<td>Blog readers</td>
<td>349</td>
<td>100</td>
<td>256</td>
<td>705</td>
</tr>
<tr>
<td>Reader status unclear</td>
<td>88</td>
<td>82</td>
<td>93</td>
<td>263</td>
</tr>
<tr>
<td>Total</td>
<td>834</td>
<td>1381</td>
<td>648</td>
<td></td>
</tr>
</tbody>
</table>

The most dramatic difference in this data is the gender balance between strangers and blog readers. Strangers were far more likely to identify themselves as female than as male. Even if all of the commenters who did not give an indication of their gender were actually male, there would still be more female than male strangers, by a large margin.

Meanwhile, blog readers -- those taking the blogger’s side regarding the “correct” approach to reading the thread -- appeared more likely to be male (though this would not be the case if all commenters not revealing their gender turned out to be male).

Of the 23 bloggers included in this dataset, only four were female. Professional information was available for 20 of the 23 bloggers. Of these, 12 had done some work in programming, web development, systems administration, human-computer interaction, or some other field related to computers. Most of the bloggers listed more than one vocation. Five had done some work as writers or journalists of some sort. Three were in academia; two in communications; one was a librarian.

Natives noticed the gender imbalance in the "Overhaulin'" thread, in which strangers sought to get their family cars fixed up on a cable TV show. One native commented:

Most of the postings were from women. Women who actually knew a fair bit about the cars, and wanted their men to be happy.

Later, a native on the same site asked, "are women really this dumb?" While correctly identifying the gender imbalance in this thread, natives were also linking this gender difference to perceived lack of intelligence and poor Internet skills.

The gender imbalance on the Overhaulin' thread was striking; a frequency visualization from ManyEyes makes the common words used by strangers visible [Figure 1]. The overwhelming number of requests were for Overhaulin' to treat the car of a male relative. In all, there were 175 comments left by strangers on the Overhaulin' thread. The phrase "my husband has a," usually followed by the year and make of a car, was used 27 times by strangers (while strangers wrote "my husband has" 37 times, and "my husband" 124 times). [Figure 2].

This common plea seems to indicate a community: of TV watchers, devoted wives, and people who use the Internet in a distinctly different way (as natives would argue, an incompetent way) from those who are maintaining the blogs where these comments appear. This is not the only phrase characteristic of strangers' comments. Any thread about celebrities or TV shows turned up some permutation of the phrase "I/we watch/love your show daily/all the time" with regularity. In general, strangers defined themselves as a group as devotees of the (largely non-Internet) media they consumed.

While natives picked up on the striking demographic pattern in the Overhaulin' thread, they made other generalizations about the demographics of strangers which were not as accurate. In parodies and commentary, they characterized them as American, Southern, Republican, inbred, poor (from "trailer parks") seekers of pornography, and above all else, as possessing little intelligence:

So, Murray, as you can see, I have slept with three generations of relatives, some of them my own children, and, well, they are becoming increasingly stupid. Is there something you can recommend for me to help make them less stupid? I found this site on my own, so you know I am smart. What can I do to keep my kin from gravitating toward Pauly Shore movies and the Republican party?
Wow!! It's really true that the average I.Q. in the U.S. is 100—just a little over retarded. No wonder you retardicans vote for bush.

Jesus, 98% of the people on this thread must be Bush voters.

Being English, it warms my heart to see so many prime examples of American stupidity. Thank you for the laughter and the smiles.

This whole thing makes you realize, it's too late. America is done. Give up, the race is over and we lost.

The teenager who wants to "pimp her boyfriends ride"... wtf? Does she live in some bum-f*** town in Alabama where they would think this is a priority?

I'm trying to find a way to become a millionaire like you someday Bill, but the problem is I'm a freakin' moron, born from low income [...] I usually sit at the corner of 7 and Warren in Detroit, holding a sign that says "Help me I'm Hungry." I weigh 250 pounds and I'm 5'8. I have long brown hair, and I'm white.

Oh god, please help me get my google back. I wrote earlier and you must have helped me cancel it, but now I can't find any of teh pretty naked ladies. WHERE IS THE PORN? I WAS TOLD THERE WAS PORN ON THIS HERE INTARWEB.

At least from initial analysis of the geographic data reported by strangers, the regional generalizations made by natives appear to be wrong. Far from being concentrated in the South, strangers appear to be distributed evenly throughout the United States (and over the rest of the globe) in ways which generally appear to reflect population density.

If anything, the stereotypes generated by natives appear to say more about who natives dislike most, and who they believe is least likely to understand technology. In reality, the most distinctive characteristic of the demographic divide here is men's and women's differing approaches to using the Internet.

4. The cultural context: Zoning

Like boyd's research project on MySpace and Facebook, [2] this research also turned up a divide patterned by the use of particular web portals. This pattern is much older, and more closely tied to early adoption of the Internet itself (with all the attendant gender, ethnicity, and educational status biases that entails); in particular, it involves the use of the America Online service.

A bit of history for context: Internet adoption prior to the advent of the World Wide Web tended to be tied to university computer use -- so much so that the month of September (when college freshmen arrived on campus, received computer accounts, and began to participate in newsgroups) was known as a trying time for veteran Internet users obliged to acculturate these hapless newcomers (newbies, or n00bs) into their established etiquette. [10]

In the Jargon File -- an Internet lexicon maintained since 1975, most recently by open-source software proponent Eric S. Raymond -- there is an entry for "September That Never Ended":

All time since September 1993.... [when] AOL users became able to post to Usenet, nearly overwhelming the old-timers' capacity to acculturate them; to those who nostalgically recall the period before, this triggered an inexorable decline in the quality of discussions on newsgroups. Syn. eternal September. See also AOL!. [25]

Following that direction, and looking at the definition of “AOL!”:

AOL! [Usenet] Common synonym for “Me, too!” alluding to the legendary propensity of America Online users to utter contentless “Me, too!” postings. The number of exclamation points following varies from zero to five or so. The pseudo-HTML

<AOL>Me, too!</AOL>

is also frequently seen.[24]

Since at least 1993, then, denizens of AOL have been recognized by elite computer users as mannerless boors set apart from reasonable Internet users by their writing habits. One might think that as AOL's influence as an Internet service provider has waned, this characterization of its users would go away. Surprisingly, though, "AOL user" shows up as a derogatory term multiple times in my dataset, which dates roughly from 2002-2008. The epithet is used by bloggers and their readers to identify the people who show up on their blogs looking for celebrities or otherwise writing in ways that, to the bloggers and readers, don't make any sense:

I swear, this is what AOL did to the internet. Even if the WAS the Overhaulin' website, do these retard actually beleive [sic] that getting on the show would have something to do with filling out a comments page? /me rolls his eyes.

[Blogger, in comments] I want to point out the last person posted 50 times.

[Blog reader, subsequent comment] Must be an AOL problem.

In some cases, the reference to AOL is oblique, as in this blog reader's parody comment mentioning the company's "free hours" offers to new customers:

Maury, I want you to find something for me. It is the website for a man named Ryan MacMichael. Do you know where it is? I can't find it, Maury, and I know this is your website, Maury, because there's a
While the native above emphasized the provincialness of an AOL user not thinking of the Internet beyond her "75 free hours," a reader on another thread quipped "I am not sure that they are really ready to head out into the internet with out AOL to hold their hand." This is another view of AOL from bloggers and readers: AOL is a "walled garden" or "gated community" which oversimplifies the Internet for its users, keeping them from developing critical reading and writing skills on the "real" Internet.

Bloggers and their readers summed up the problems they saw on their pages as "an AOL problem" even in cases where commenters posted emails from Yahoo or other domains, which happened often. While the AOL designation began with a historic event shaped by a large corporation and the exclusivity of universities, for natives it has come to symbolize a broader divide based on education level, social class, or intelligence which is made apparent by the reading and writing practices of errant commenters.

5. Address literacy

Number-and-address-regulating bodies (ICANN specifically) have been recognized as central to de-facto management of the Internet. Regulation of numbers and addresses is perhaps the only centralized management of the Internet; it is certainly the most important, as navigating to the server you wish to find is wholly dependent on address-based routing. Like other forms of authentication, IP addresses and URLs are important in trying to critically assess the source of a website. [19, 13]

Of course, reading and writing are at the root of this. What is an IP address but a string of numbers? A URL but a string of characters? And the process of resolving a URL into an IP address takes a particular kind of reading, accomplished by code which is written, read, revised, and interpreted by computer programmers. IP and URL literacy could be considered the most powerful literacies on the Internet; these addresses are central to making the Internet run. In general, those who work in technology are more fluent in the language of numbers and addresses than those who do not. Certain players have fought to gain a greater say in domain management than others. "Companies want to establish a rule that they are entitled to any domain names using their trademarks," cybersquatters buy up these domains and attempt to profit by selling them back to interested parties. [19] Controlling a domain name tied to your brand is also related to authentication.

"Natives" employed their domain name knowledge as a means of critically evaluating comments from strangers and of attempting to control the flow of dialog. Bloggers especially made frequent use of IP addresses and URLs to determine why strangers showed up on their blogs, understand the nature of strangers' errors, and defend their interpretation of their blog posts as correct, while explaining to strangers why they ought to be reading and writing elsewhere.

Bloggers had resources not available to readers and strangers in making sense of a thread. One such tool was the ability to look at referrer logs, records of how people made their way to the blog. Hosting their own blogs, having command-line access to their servers, or using advanced blogging plug-ins made this information available to bloggers; all of these take higher levels of technical skill than simply navigating around the web and posting comments. Access to this data is generally restricted, password-protected along with the rest of the backend of a blog.

Some bloggers used their referral logs to explain and make hypotheses about the presence of strangers on their sites, triangulating with search engine results. This use of referral logs turned up errors in strangers' spelling and search strategies. It also yielded more demographic data about their search practices, including which search engines they were using, domains they hailed from (perhaps indicating which ISP they were using), etc.

According to the httpd logs, Don Foster came to this page from <http://search.msn.com/results.aspx?q=www.efax.cancel&FORM=DNSERR> What that means is that he typed "www.efax.cancel" into the location bar of Internet Explorer, then when it couldn't find that site he typed it again into the search form on the page that IE gives you when it can't find the site you told it to go to.

This analysis indicates the stranger in question did not construct a URL correctly, part of the powerful literacy practices around addresses in which bloggers and readers engage.

Lacking other identifying information, this blogger also used IP addresses to identify strangers:

Anonymous says: cancel my account [No name or email address on this one, but it came from 162.119.232.102<http://ws.arin.net/cgi-bin/whois.pl?queryinput=162.119.232.102>]. -Josh]
In this instance, the blogger links to a website which a reader might use in order to connect the IP address to actual geographic addresses, names, or company names. Only bloggers exhibited any awareness of sites like Arin and Internic which provide these authenticating "whois" services.

Again, for the most part the IP information is not available to commenters other than the blogger; it is often recorded by the blog software but not published along with the comment. This information is useful to interpreting comments, by understanding a commenter's context, but access to it is password-privileged. Blog readers did not have access to referral information, but some of them were aware it was there; one reader on the Maury thread asked Ryan, the blogger, to share what information about strangers could be gleaned from the referral logs.

At times, bloggers and readers did attempt to share their way of using URLs with strangers, to help them read websites the way they did and direct them to pages which might have more of the information they desired. This was often a hamfisted effort:

"Get off the Internet and don't come back" is a phrase which resonates eerily with some of Lessig's arguments that "traceability regulation" could change the openness of the Internet particularly when juxtaposed with bloggers' use of Whols services and tracing of IP addresses. [13] While bloggers mostly made use of addresses to shed light on why strangers visited their sites, some of them may have been using blog software which allows an administrator to categorically block comments from a certain IP, or automatically allow comments from others. Those who understand addressing may thus have more power to determine who can participate in online discussion and who cannot.

6. Address illiteracy

By contrast to bloggers, strangers demonstrated profound misunderstanding of web addresses. They used the URL bar of their browsers to enter search terms, and failed to form URLs correctly (single words rather than addresses ending in .com etc.). Above all, they exhibited confusion about the field above blog comment boxes which asked them to enter a URL (presumably one for their own blog or of a site relevant to the discussion). Because blog software tends to publish whatever is entered in that field, that data was available for analysis. Here is a sample of errors made by strangers in the URL field (with the title of the blog post on which they appeared in parens):

1. http://hey/ (Movie: Holes)
2. http://I%20donno%20wat%20this%20is%21 (Movie: Holes)
3. http://cancel%20e-fax%20service (Cancelling eFax Service)
4. http://google/ (Google Answers HCI Program)
5. http://lancome/ (Google Answers HCI Program)
6. http://lmw52530yahoo.com/ (Google Answers HCI Program)
7. http://dscerbo1comcast.net/ (Google Answers HCI Program)
8. http://yahoo/ (Google Answers HCI Program)
11. http://I%20need%20yourn%20help%202%20%21%21%21%21%21%21%21%21%21%21%21 (Maury's Blooper)
14. http://dont%20know (Spiders! Ack!)
15. http://??? (Spiders! Ack!)
16. http://kennedy007comcast.net/ (Google Answers HCI Program)
17. http://metoo,fromethiopia/ (World Youth Congress 2008 - Need Help)
18. http://bigpond/ (Maury's Blooper)
20. http://???url??? (Harry Potter)

Examples 2,14,15, and 20 give a direct indication that some strangers are confused about what the URL field is, or what it will do when filled out. This is echoed in a comment from a stranger on a Gadgetopia thread, who appears not to have filled out the URL field on her request to have Google "cancelled" from her computer:

"i don't know what URL is Just delete me from your files, so I can get back to Yahoo."

Other errors suggest different understandings of what the URL field is for. A number of examples (3, 11, 13) suggest strangers are interpreting the field as a form of subject heading, based on the content of the messages they accompany. Others (4, 5, 8, 9) also have to do with the subject of the message, but seem to be attempts on strangers' parts to identify aspects of specific problems they are having browsing the
web. Example 1 suggests the URL field is being interpreted as a place to enter a greeting. Example 10 suggests commenters who believe the URL field is the equivalent of the "To:" field on an email message. Others (6, 7, 16) suggest commenters think it is an email address field (puzzling, considering there is another email address field labeled as such right above the URL field); they have entered data in the form of an email address, from which the blog software has removed the "@" symbol. In examples 8 and 18, commenters have entered the names of Internet service or email providers, possibly the ones they use. And in examples 12, 17, and 19, commenters have entered what appears to be their geographic location in the URL field:

"Hi Maury, my name is Davin Francis and I live in St. Kitt's. [...] Posted by: Davin Francis <http://St.%20KITT%27S>"

By contrast, bloggers and their readers used the URL field in one of two ways: to direct readers to additional information or to provide access to their own websites. The latter served as an additional means of authentication; it helped cement the identity of the commenter, providing perhaps a means to contact them or learn more about the ideas informing their comments.

The errors strangers make are not simply socially inappropriate: they actually elicit unexpected, unintended, "broken" behavior from software or servers. They do not jive with what software developers have planned for their software to do.

It can be argued, of course, that this is simply a problem of poor HCI or web design: the URL field is in a position which confuses a majority of users. This is a valid argument. "URL" in particular is clearly ineffective as a label for that field.

However, "New Literacies" scholars such as Brian Street view literacy as a two-way street, and implicated in power relations. Yes, blog software developers have done some “bad writing” in this case; they can be accused of “illiteracy” too. (This is not the only example of “bad writing” by programmers and HCI experts in this corpus; search engines are also strongly implicated. Even Google’s PageRank algorithm appears to misdirect some strangers by doing what it is supposed to do. Internet musician Jonathan Coulton currently ranks #3 on Google for the phrase “cancel my account,” ostensibly just because he is heavily linked-to; they then ask him to cancel accounts he cannot possibly have access to.)

But the infrastructure of the software and the Internet rewards the bad writing of the interface. It writes out a viable link for natives (who despite the designers’ bad writing overwhelmingly wrote “good” URLs), and a non-viable link for strangers (who overwhelmingly left this field blank or entered content which would not resolve as a working URL).

And of course, professionally, a large number of bloggers helped build and run parts of the Internet. They are part of the de-facto power structure which helps define what functional and dysfunctional online literacy practices are.

It is critical to understand web addresses; without that understanding, strangers find themselves in the wrong places, writing in ways that do not help them accomplish their goals, causing computers to produce errors. In the case of the many strangers who sought financial, technical, or safety assistance (i.e. whether spiders were poisonous, etc.), this seems particularly important.

7. Conclusions

The comment threads described here are not just distinct because of the arrival of strangers who fill the threads with inappropriate questions; confusion abounds on the Internet. Often, their distinguishing feature is the number of comments from bloggers and readers mocking, disparaging, threatening, and trying to correct these strangers. On some comment threads, natives’ parodies of strangers outnumber the comments from strangers themselves. Natives expended a good deal of energy discussing how wrong and how stupid strangers are. A number of their comments suggest that strangers stop using the Internet entirely, as they are deemed not capable of using it properly:

"i hereby ban the above morons from the Internet for a period of 30 days. please turn your keyboard upside down and walk away."

"shut down your computer, pull the plug out of the wall, phone Comcast, cancel your account."

These tend to be histrionic, as do comments which suggest strangers should weed themselves out of the gene pool:

"read some of the absurd messages above your own, realize you're a f**king idiot, remove your ovaries, then go to http://google.com and type Maury into the little empty box in the middle of the screen."

"I am a complete idiot. I post comments before reading that this is a personal blog. I have a car, and have proven that I am a danger to society because my attention span is obviously zero. Please fix my car, then fix me, because I do not want the human race tainted with my faulty genes."

Sincerely yours,

Joe & Jane Americana

Darwin Award Honorees
In these findings, a new model of "illiteracy" arises. Acculturation in online settings gives certain users a head start, while others' written presence online marks them as "from the wrong side of the tracks," often meaning the wrong Internet service provider or portal. Bloggers and their sympathizers use the stigma of illiteracy to identify who they think is worthy of having a voice on the Internet, and who is not. The people they would rather not hear from are often women, AOL users, poor Americans, and those with different political opinions.

Because bloggers run the software supporting these forums, they have the power to enforce their conception of "appropriate" Internet discourse by deleting comments or blocking particular domains from commenting. Many bloggers in this study were sysadmins, programmers, interface designers, and others in positions of power to shape the Internet.

If the new focus of digital divide studies is the skills needed to compete in a global economy, there is a need for closer attention to specific elements of online reading and writing competence. And these cannot be assumed to be universal across contexts, just as the same skills cannot be used for reading a poem and an annual report. A growing number of researchers, in education, information science, and elsewhere, recommend understanding reading and writing practices as specific to particular knowledge domains. [7, 12, 15, 21, 23]

A general recommendation arising from the current study would be that awareness of and competence with URLs and domain names are central to digital literacy education. Users who understand Internet addressing systems established by regulatory organizations like ICANN have the easiest time giving directions to resources, certifying their own identities, authenticating the identities of others, evaluating the sources of web sites, and making the technology efficiently do their bidding.

8. References


[23] Tuominen, K; Savolainen, R; and Talja, S. "Information Literacy as a Sociotechnical Practice." Library Quarterly, 75, 2005.
