

*An Analysis of a Text-Based Academic Information Web Page:
Internet Usage at the American Sociological Association's
Section on Labor and Labor Movements*

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Table 05: Labor, Academia, and the Internet

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Analyses of academic web site internet usage are not well developed and, for all but the largest and better funded sites, remain simply speculative in nature. This paper provides an exploratory examination into the internet usage of a primarily information based academic web page. Two related questions are addressed in this paper: Does the use of an academic web page effectively disseminate information, particularly at the sub-disciplinary level and, is it necessary to use multimedia to generate internet traffic interest? The American Sociological Association's Section on Labor and Labor Movements web page internet usage visitor traffic from July 2006 through July 2008 is the source of data for the paper. The paper demonstrates that internet usage continues to increase and that information dissemination is broad-based throughout the global academic community, although primary usage remains concentrated in the United States. The findings are speculative with regards the second question and suggest that multimedia materials may increase internet usage traffic to a larger audience although may not necessary in meeting the needs of the primary user audience. The paper concludes that a text-based information academic web page is an effective means of disseminating information to a target constituent audience but not for a broader global audience, including as a means of providing information to the individuals under study by the sub-discipline.

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Introduction

As we see continued development of online technologies, software, browsers, and text-based information academic web pages, an increasingly important role is played by information providers in supplementing teaching and research services, and disseminating academic information through online sources. How will researchers, educators and administrators know if the information provided is being used in a meaningful and purposive manner? Is online information being disseminated throughout the targeted academic community? Is that information being viewed by visitors beyond the targeted audience and is it going beyond that community to transgress borders and even cultures? Where are the visitors viewing academic web pages and are they academics, students, the general public, policing bodies, or simply casual browsers? These questions are among many questions being asked by educators and administrators of the time and energy spent in disseminating online information to academic communities. To begin to understand the role played by text-based information academic web pages, it is necessary to statistically analyze the usage of a professional academic web page and delineate that variability in a succinct manner.

Analyses of academic web site internet usage are not well developed and, for all but the largest and better funded sites, remain simply speculative in nature. This paper provides an exploratory examination into the internet usage of a primarily information

based academic web page. Two related questions are addressed in this paper: Does the use of an academic web page effectively disseminate information, particularly at the sub-disciplinary level and, is it necessary to use multimedia to generate internet traffic interest? The purpose of this research is to begin to answer these questions and to evaluate the accessibility of the American Sociological Association's Section on Labor and Labor Movements through statistical analysis of the site traffic data files.

The American Sociological Association's (ASA) Section on Labor and Labor Movements (LLM) web page internet usage visitor traffic from July 2006 through July 2008 is the source of data for the paper. This research interprets the data generated over two years with the use of web tracking software provided by an independent provider. The paper demonstrates that internet usage continues to increase and that information dissemination is broad-based throughout the global academic community, although primary usage remains concentrated in the United States and likely among members of the academic sub-discipline. The findings are speculative with regards the second question and suggest that multimedia materials may increase internet usage traffic to a larger audience although may not necessary in meeting the needs of the primary user audience. The paper concludes that a text-based information academic web page is an effective means of disseminating information to a target constituent audience but not for a broader global audience, including as a means of providing information to the individuals under study by the sub-discipline.

Literature Review

A brief study of the literature reveals the importance of online usage has drawn little attention of academics, particularly sociologists. Certainly, there are some in the academic community looking at online usage and internet traffic. However, the majority of tracking undertaken by internet site providers remains for commercial interests and goals. Xiaodong Li (1999) provided a review of the tracking done by libraries of online users and found that there were no studies at that time that evaluated the effectiveness of library web usage and promotion. Jeanie Welch (2005) also provided a review of library tracking statistics and found that tracking was geared primarily to where users were going on the web site and what type of information they had searched, including reference and cataloguing online resources.

James Katz and Ronald Rice's 2002 *Social Consequences of Internet Use* provided the first comparative national random study to examine the social consequences of internet usage based upon demographic information. They provide a fairly comprehensive analysis of the social consequences of internet usage and a broad and deep overview of the existing research within sociology. While there are limitations to the functionalist, evolutionary theoretical approach taken by Katz and Rice, their book is nevertheless one which provides a fairly comprehensive review of the existing research and cannot be neglected given its pioneering importance in answering internet usage questions. Katz and Rice (2002:28) found in their review of the literature that there was very little socioeconomic and demographic analyses of internet usage but where they found useful data, all indications were that income, age and education are the key variables found in tracking users--although the authors, it is believed rather accurately,

suggested that these findings “may well mask the underlying differences that affect long-term social integration and access to resources.”

More recently, David Nicholas, Paul Huntington and Hamid Jamali (2008) demonstrated a novel form of deep log analysis of internet users, tracking data over 18 months of some 16,865 internet sessions covering 110,029 page views. They combined this information with the users’ searching behavior and then administered survey questionnaires to 49,266 scholars derived mainly from Elsevier’s (publisher of science and health journals and other publications) mailing list, to which 6,344 responded to the questionnaire. Nicholas *et al.* appropriately caution us given their low response rate yet, their combination of online logs with survey methodology constitute a novel means to uncover attitudinal and demographic data not readily obtainable from tracking logs. Furthermore, their research provided a richer user portrait demonstrating the sheer diversity of usage.

Huntington, Nicholas, Jamali, and Watkinson (2006) have also demonstrated that internet log files can provide detailed departmental and computer information on users through the internet protocol (IP) addresses recorded in users’ usage of OhioLINK--and they linked this information to detailed journal usage by department. They again caution us given the lack of comprehensive data but suggest (2006:307) it is “all about squeezing the maximum data from the skeletal digital fingerprint people leave behind when they access the service.” In the Nicholas, Huntington, Jamali, and Watkinson (2006) work investigating the online user log files for EmeraldInsight and Blackwell Synergy, the authors provide a detailed literature review of tracking information while examining the behavior and available demographic data for nearly three million users. Yet, these

research efforts can most certainly be considered pioneering efforts in this new science as many questions about users remain unanswered from their detailed research of enormous data files.

A quick evaluation of the publications coming from the Centre for Information Behaviour and the Evaluation of Research (CIBER) at the University of London (www.ucl.ac.uk/ciber), likely the leading academic institute examining the log files of internet users, provides an interesting examination of the research and applications of past and current research into internet user information data files. CIBER is a center active in examining the log files and usage of electronic journals by means of innovative log analyses. Researchers at CIBER have conducted various studies on usage including Nicholas *et al.* 2006, Nicholas *et al.* 2008, and Huntington *et al.* 2006 discussed above. Analyses have included using typical items such as time, date, item used, journal subject category, date of article publication, references, repeat visits, academic departments and organizational affiliation, occupation, and a number of other visible information traces left by users. Nevertheless, one can only get the impression that the bulk of the research developed at center is ultimately geared towards commercial applications--even when applied to research and academic user communities.

Research Methodology

The data generated to be analyzed in the current study was generated with the StatCounter web tracker program over a two year period from July 14, 2006 to July 28, 2008. The choice of data collection from July 14, 2006 to July 28, 2008 is simply a matter of convenience: July 14, 2006 represents the first day the StatCounter code was

online and collecting data; whereas the July 28, 2008 date represents the last possible date data could be included within this paper. The decision to include data until July 28, 2008 was based upon an earlier investigation which revealed a sharp rise in the number of visits after information on the ASA Annual Meetings labor related sessions was posted online (see below). The summary data is available online at the ASA Labor and Labor Movements web page in a Microsoft Excel spreadsheet (<http://www.laborstudies.wayne.edu/ASA/LLMsummarydata.xls>).

The StatCounter invisible tracker code is easily installed on the web site in the home page code. The StatCounter tracking service is free of cost provided that the number of page visits remains under 9,000 per day. There are no advertising banners or requirements for site users to subscribe to or purchase any services. As well, the StatCounter limits the amount of complete data to a sample of one hundred ($n=100$) although unlimited summary statistics are available. Certainly the free service option limits the amount of available data but has the advantage of keeping costs to zero dollars for the service.

The reports produced by the StatCounter tracking tool covers summary statistics such as date accessed, number of visits, repeat visits, new or first time visits, number of page loads from the home page, and day of the week. These variables are also available by day, week, month, year, or for any given period chosen by the user. There are also more complete data available for the 100 most recent visitors to the site including which search engine is used (if any), entry page, exit page, which Domain Name System (DNS) is used, which Internet Service Provider (ISP) is used, which computer is used based upon Internet Protocol (IP) address, where the computer is located by country, state or

province, city or municipality, geographic distributions of visitors, which organization or institution, which search terms or keywords used, referring web pages, Google mapping information, and a host of other data. Obviously, the limit of 100 visitors places considerable limitations on the richness and robustness of the data gathered.

There are some other obvious limitations to the data collected given the limits to using the free service. The recent studies by Huntington and Nicholas *et al.* from the CIBER discussed above, demonstrate that the more information that is available for data analysis, the more one can learn about the behavior of visitors. This limitation should be obvious and financial constraints to research designs are common and must be made given budgetary limitations. Having said this, there are also other limits to the data which are not quite as obvious. The biggest limitation is the manner in which the data is gleaned from visitors' computers--by the placing of a 'cookie' on the visiting computer. Quite simply, if a visitor turns off their cookies in their browser, they will not be included in the data collected. This is an important point as the individuals doing so may constitute a specific and identifiable group or cohort of individuals (and they can do so without having any restriction placed upon browsing the LLM site). Another limiting factor comes from whether the computer is a private-use or public-use computer: Multiple visits from the same computer could indeed be from one individual or from a number of different individuals (such as using a computer in a lab or library). Another apparent limitation in the data is the usage by organizations, specifically universities, of firewalls to limit or prevent placement of cookies or the transmission of information to the log data file. Finally, a last major limitation of information contained in the data files comes from

ISPs which randomize the DNS of visitors' computers as a security mechanism (see below for a discussion of this limitation).

It is relatively easy to track the IP address of a given computer accessing the LLM page. For example, 149.142.201.xxx recently visited the LLM page and the computer is located at the University of California in Los Angeles (the xxx is used to protect privacy). Tracking the computer to the individual user is likewise a fairly easy endeavor but does not provide data which is of importance--other than generating data indicating the amount and length of usage of a given individual. So when examining the information tracked by path the DNS entry GOODWIN390.SOC.NYU.EDU (accessed LLM page on July 28, 2008 at 13:18:55), one could reasonably conclude that the computer is operated by the LLM section's newsletter editor, Dr. Jeff Goodwin at his Department of Sociology office at 4115, 295 Lafayette St., New York University. What this can tell us, as discussed below, is whether the LLM web site is being used by LLM members, ASA members, or people beyond our organizational membership. When the computer is listed as an ISP, the ability to track the origin of the visitor's computer is more difficult. For example, the author's own home computer is routed through a very large Canadian ISP, Bell Canada, which routes connections through either Windsor or Toronto, and randomizes the IP address for an additional layer of security. The result of which can be thousands of different IP addresses for a single computer. If the computer is a portable, any use on wireless networks distorts further the data by going through different networks (it is believed a more sophisticated analysis software design could filter this out).

Research Findings

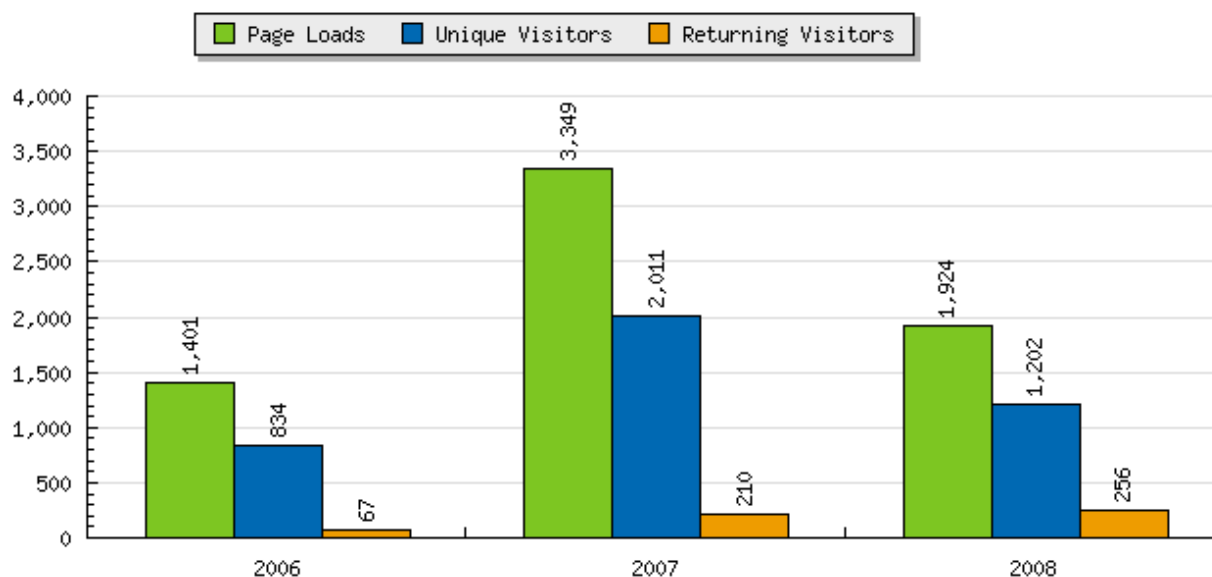
Notwithstanding any of the limitations to the data discussed above, it is believed the data offer considerable information worth delineating. Each of the findings can and should serve as an entry point for further research into the behavior of online visitors and the information sought after in visits. The research findings are surprising given the limitations discussed above and the esoteric uniqueness, or specificity of the Labor and Labor Movements web page.

Visits

Covering the period from July 14, 2006 to July 28, 2008, there were a total of 6,674 page loads and 4,047 unique visitors. The data in Table and Figure I illustrate that of these unique visitors, 3,514 were first time visitors while 533 had returned to the web site. Returning visits are calculated purely on the cookie (which need not be removed from the visiting computer), if this person returns to the site after the passage of one hour. A first time visit is calculated if there is no cookie present on the visiting computer. Unique visits are simply the total of the returning visits and first time visits. Page loads represent the number of times the LLM page has been visited. Of these visits, slightly over seventy percent (70.30%) occurred in 2006 and 2007. Yet, the number of returning visitors and pages loaded increased over the years indicating that more people were returning in 2008 than in previous years (21.30% returned in 2008, 10.44% returned in 2007, and 8.03% returned in 2006). As well, the number of unique visitors continues to grow and all indications point to an increase for 2008 over 2007 and 2006.

Table and Figure I: Visits by Year

Year	Page Loads	Unique Visitors	First Time Visitors	Returning Visitors
2008	1,924	1,202	946 (78.7%)	256 (21.3%)
2007	3,349	2,011	1,801 (89.6%)	210 (10.4%)
2006	1,401	834	767 (92.0%)	67 (8.0%)
Total	6,674	4,047	3,514 (86.8%)	533 (13.2%)

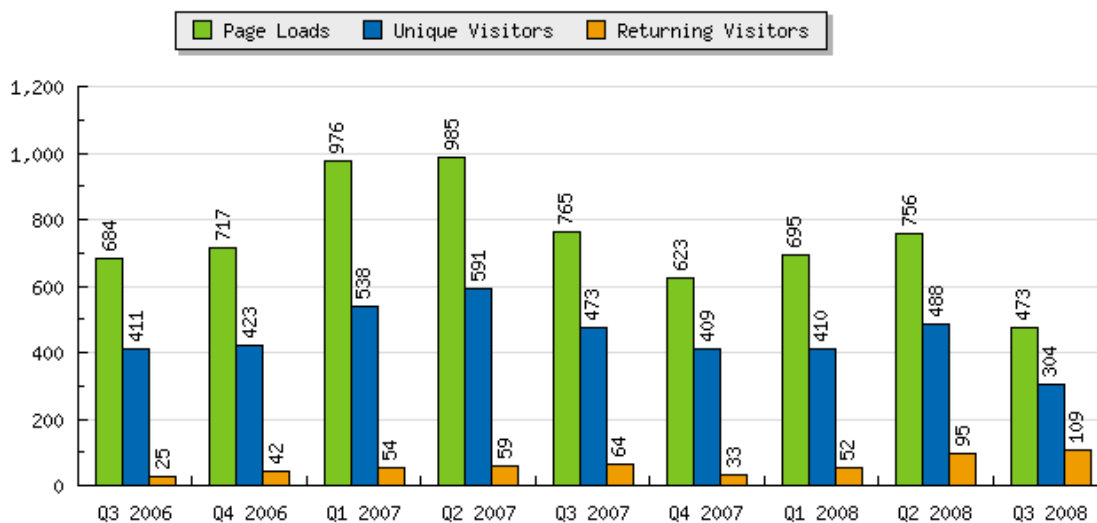


Further examination of the visits to the web site can be accomplished by dividing the period of study years into quarterly increments. From Table and Figure II, it can be seen that there is a continued increase in the number of returning visitors. It must be pointed out that the third quarter of 2008 consists of only 28 days and the third quarter of 2006 was only 3 ½ months. In the first quarter of the web page tracking software (the third quarter of 2006), only 6.1% of the visits were made by returning visitors. Contrasted to this is the much higher percentage, 35.9% of visitors, who were returning visitors in the third quarter of 2008. While the third quarter of 2008 may be a statistical artifact given the short period of time so close to the ASA Annual Meetings, the first and second

quarters certainly demonstrate appreciable increases in returning visitors measure 12.7% and 19.5% respectively.

Table and Figure II: Visits by Quarter

Quarter	Page Loads	Unique Visitors	First Time Visitors	Returning Visitors
Q3 2008	473	304	195 (64.1%)	109 (35.9%)
Q2 2008	756	488	393 (80.5%)	95 (19.5%)
Q1 2008	695	410	358 (87.3%)	52 (12.7%)
Q4 2007	623	409	376 (91.9%)	33 (8.1%)
Q3 2007	765	473	409 (86.5%)	64 (13.5%)
Q2 2007	985	591	532 (90.0%)	59 (10.0%)
Q1 2007	976	538	484 (90.0%)	54 (10.0%)
Q4 2006	717	423	381 (90.1%)	42 (9.9%)
Q3 2006	684	411	386 (93.9%)	25 (6.1%)
Total	6,674	4,047	3,514 (86.8%)	533 (13.2%)



The visitor information can be further broken down into months and even weeks, giving an indication as to when and possibly what has led to more (or less) visits at a given time. While there may be many different reasons for increases or decreases in visitors, both new and returning, there may be some very direct causal explanations for

some of the changes. Figure III and Figure IV presents the data for the breakdown of months and weeks respectively. The data for monthly and weekly visits is found in Appendix I and Appendix II respectively. Data are also available for a daily visitor count and is reproduced online at and available online at the ASA Labor and Labor Movements web page in a Microsoft Excel spreadsheet (<http://www.laborstudies.wayne.edu/ASA/LLMsummarydata.xls>). The spikes in data page loads during the months of June 2007 and July 2008 correspond to the addition of the ASA Annual Meetings labor related session information that is added to the web site every year. Interesting enough, the first observable spike in page loads and unique visitors, during January 2007 (actually occurring on the last three days of the month, January 29-31, 2007, *see online database*), are not easily explained as the other two spikes in visitor activity.

Figure III: Visits by Month

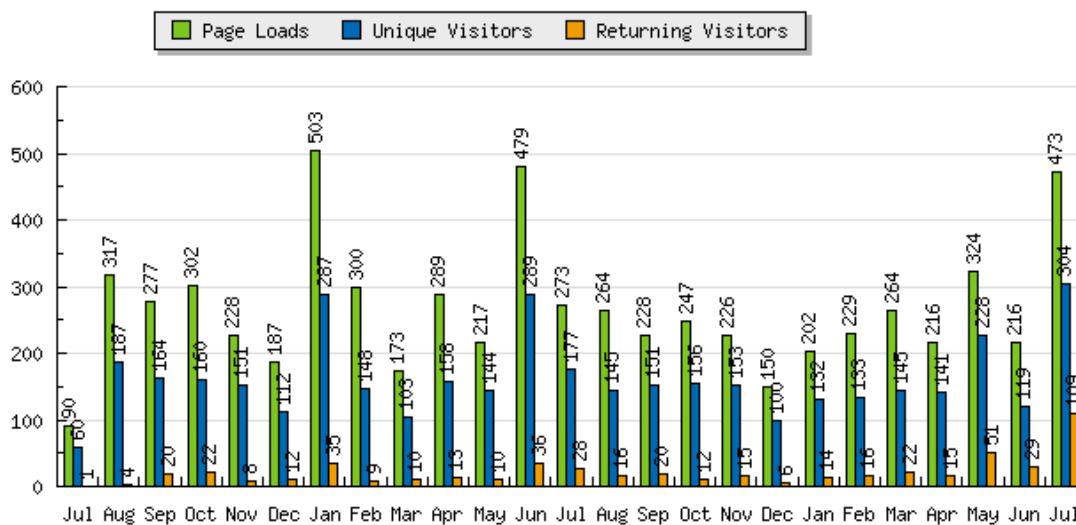
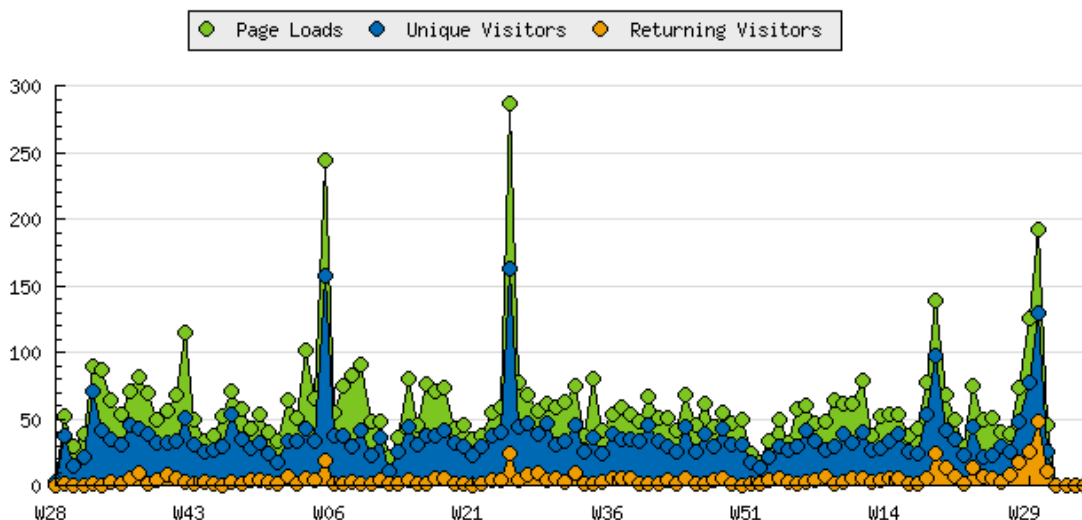


Figure IV: Visits by Week

Origin, Entry and Exit Points

As mentioned above, determining detailed demographic statistical information on visitors is limited given the 100 record data limitation placed upon free accounts.¹ Nevertheless, considerable information can be derived from the sample and the findings should be taken as somewhat representative of the larger database of visitors. Yet, caution must be exercised with any conclusions as there is little statistical or substantive argument that can suffice to hold the sample as truly representative.

Table V represents the referring link or web site giving a link to the ASA LLM web page. It is interesting to note that 71% of all visitors have no referring link because it, in essence, indicates that individual visitors have the web page bookmarked, it is clickable from a computer desktop, or visitors have the Uniform Resource Locator (URL) available in memory (the brain type) or on a sticky note. In other words, the majority of visitors to the LLM web site did not use a link to get the web site. Also worthy of noting

¹ Unless otherwise noted specifically in further discussion of data findings, the remaining discussion examines the 100 case sample derived from the larger database.

is the linking visitors from the ASA (10%), Wayne State University Labor Studies pages (6%), search engines (4%: Google 3%, Ask.com 1%), and from email sent to individuals from other individuals or the LLM listserv (which can not be distinguished from the available data) (6%). It is believed that individual instructor's own personal web pages can help in bringing attention to the LLM webpage and the referring link from former chair (2005-06) of the LLM section, Dr. Peter B. Evans, demonstrates that it is an effective means of communication (it should be noted in passing that his web page as with other instructors' pages show up regularly as referring links in the data).

Table V: Referring Links

71	No referring link
7	www.asanet.org/cs/root/leftnav/sections/section_pages/section_on_labor_and_labor_movements
5	www.laborstudies.wayne.edu/tools-info/Articles.html
3	asanet.org/cs/root/leftnav/sections/section_pages/section_on_labor_and_labor_movements
2	us.mc560.mail.yahoo.com/mc/showMessage?fid=Inbox&sort=date&order=down&startMid=0&.rand=1209182486&midIndex=5&mid=1_2701896_AMFu%2FNgAALGbSIipfg2tT1VdiJs&eps=&prevMid=1_2707721_AMFu%2FNgAAGZ7SIjISAQ20inJRfs&nextMid=1_2701399_ALxu%2FNgAAXW5SIioQQR5Lx
1	bl119w.blu119.mail.live.com/mail/InboxLight.aspx?n=1962003100
1	www.google.com/search?q=asa labor &ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-US:official&client=firefox-a
1	sociology.berkeley.edu/faculty/evans/
1	us.mg2.mail.yahoo.com/dc/launch?.rand=67bb5c7lrk6fd
1	www.google.com/search?q=asa labor movements section&rls=com.microsoft:en-us:IE-SearchBox&ie=UTF-8&oe=UTF-8&sourceid=ie7&rlz=1I7GGLJ
1	www.google.com/search?hl=en&q=labor movements
1	www.laborstudies.wayne.edu/
1	webmail.cornell.edu/squirrelmail/src/read_body.php?mailbox=INBOX&passed_id=4321&startMessage=1
1	us.mc544.mail.yahoo.com/mc/showMessage?fid=Inbox&sort=date&order=down&startMid=0&.rand=952520076&midIndex=2&mid=1_6345_AIQxvs4AATLQSIipfgx4WVVdiJs&eps=&prevMid=1_4136_AIoXvs4AAGntSIj%2FBwhNGD%2FG4wo&nextMid=1_6860_AIUxvs4AABICSioQwMemhY5Epl&m=1_20
1	by131w.bay131.mail.live.com/mail/InboxLight.aspx?FolderID=00000000-0000-0000-0000-000000000001&InboxSortAscending=False&InboxSortBy=Date&n=1745674396
1	www.ask.com/web?qsrc=2417&o=0&l=dir&q= what were the american labor movements

The entry point is the starting page for the visitor to the LLM web page. This distinction in the data is important because it helps to differentiate those who get to the site for the site *per se* from those who search for a specific term or terms leading to one specific sub-page. 56% of all visitors to the web page entered it from the home page by loading the page containing the embedded StatCounter code placing the cookie on the visitor's computer (www.laborstudies.wayne.edu/ASA/main.html). The exit point is the page from which the visitor leaves the site by effectively closing the web page, closing the browser, or simply turning the computer off. 42% of those visitors leaving the site do so from the main page which is part of the overall introductory home page.

System Information

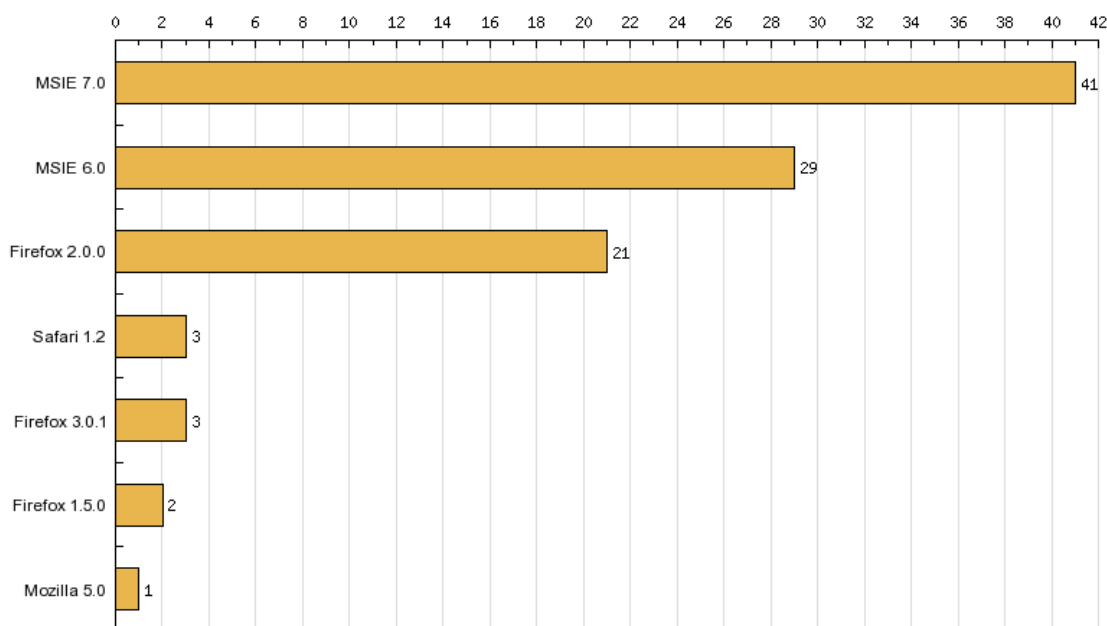
Each of the visitors to the LLM web site also provides information about the computer they are using when making the visit. This becomes important when determining if information made available for dissemination is actually disseminated in the manner expected during development. Questions can be answered about which browser is being used and whether the web page actually looks and works as is expected. Similarly, computer screen resolutions vary from computer to computer, and from user to user--knowing which can help optimizing the layout for ease of usage and to make the overall site appealing and add ease of navigation for the visitor. As well, different visitors use different operating systems and this information can provide an indication of the technical background of users. Finally, data is collected on whether a visitor has Javascript enabled on their computer--the importance becomes apparent when heavy reliance on Javascript may alienate visitors by preventing them to access information.

The ASA LLM web page is optimized to generally work in a Mozilla and Firefox environment. Having said this, when new pages are developed, they are checked in Microsoft Internet Explorer to ensure that pages conform to the most commonly used browser. Quite frequently, a web page will be developed by a software resident program that makes pages specifically for the proprietary browser (as an example, Microsoft FrontPage is commonly used for web page development and it formats pages, sometimes at the exclusion of other browsers, for Microsoft Internet Explorer). Therefore, LLM web page code is written without the usage of web development software and is written with text based software. Indeed examination of the data in Table and Figure VI demonstrates the common usage of Microsoft Internet Explorer amongst visitors and this software accounts for 70% of the visits. Thus, it is useful to ensure that pages conform to the most commonly used program. Firefox accounts for 26% while Mac's Safari accounts only for a surprising 3%.

Related to the browser used by visitors is whether a visitor has a Javascript enabled computer. Microsoft Internet Explorer and Firefox generally direct users to download Javascript when a site has it embedded in the code. The LLM web site has considerable code written in Javascript but, the LLM web page is designed and laid out so that a non-user of Javascript could access the LLM web site and all its contents. However, many of the sub-pages do require Javascript to open them from the originating page which may limit accessibility--the remedy to this in the past has been to include these pages directly accessible by non-Javascript computers from the 'search' page listings. In the sample selected, a 100% of visitors had Javascript installed on their computers.

Table and Figure VI: Browser Information

Percentage	Browser Name	Version
41%	MSIE	7.0
29%	MSIE	6.0
21%	Firefox	2.0.0
3%	Safari	1.2
3%	Firefox	3.0.1
2%	Firefox	1.5.0
1%	Mozilla	5.0

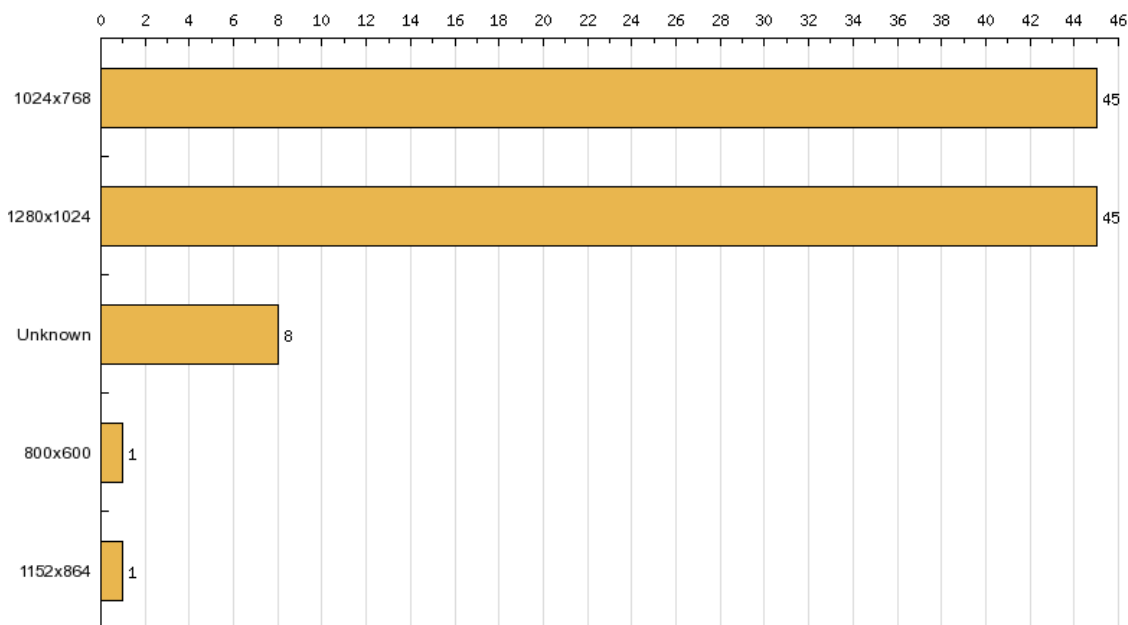


Another consideration in web development and visitor accessibility is the resolution of the monitor or screen used by the visitor. The LLM web site has been developed to be viewed with a monitor resolution of at least 800 x 600. This is based on the old Windows 3.1 standards and found to be the lowest common resolution used by LLM web site visitors. Resolutions at a higher level, such as 1024 x 768 or 1280 x 1024 are becoming more common with bigger monitors and better video, operating system and browser software. And, the LLM web page loads easily into these higher resolutions

while maintaining appearance integrity. Examination of the data found in Table and Figure VII support this claim. At least 91% of visitors are using resolutions higher than 800 x 600. Given these findings, an increase in resolution design layout to 1024 x 768 is long overdue!

Table and Figure VII: Computer Monitor Resolution

Percentage	Resolution
45%	1024x768
45%	1280x1024
8%	Unknown
1%	800x600
1%	1152x864

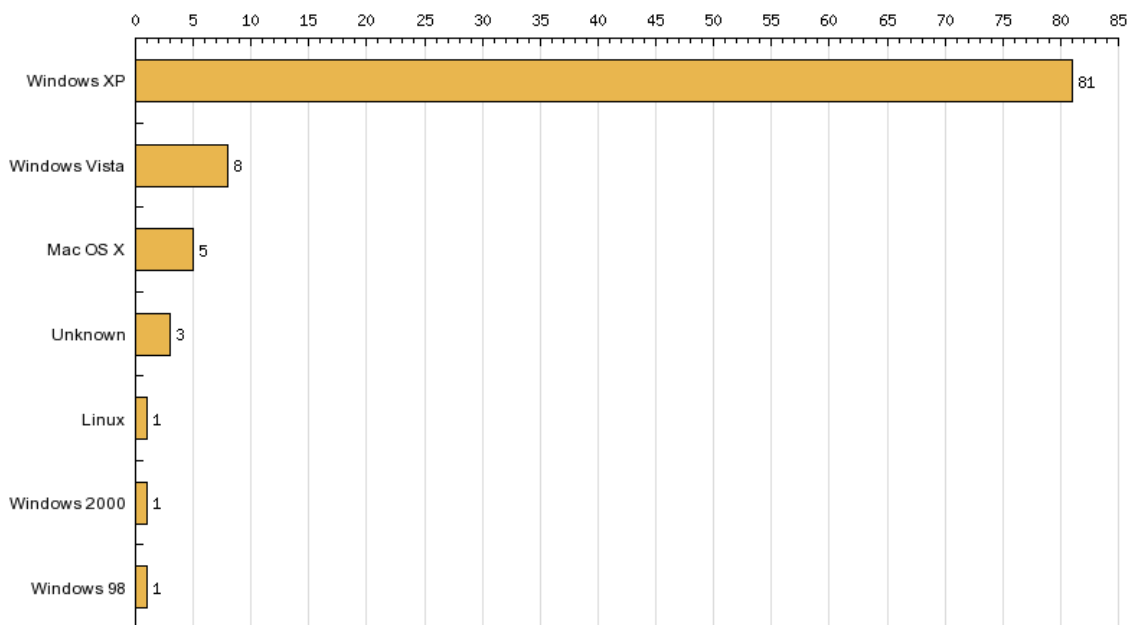


A final aspect to consider in examining information pertaining to the visitor's system is the computer operating system used on the users' computers. Table and Figure VIII provides a breakdown of the computer operating systems reported being used in the

sample examined. From this data, one can determine the technical and organizational background of visitors given the skill levels required for each of the operating systems. Clearly, the vast majority (91%) of visitors are using a Microsoft Windows environment with at least 81% using Windows XP. The number of visitors using older versions of Windows (Windows 98 and Windows 2000) was only 2%. Mac users represented only 5%.

Table and Figure VIII: Computer Operating System

Percentage	Operating System
81	Windows XP
8	Windows Vista
5	Mac OS X
3	Unknown
1	Linux
1	Windows 2000
1	Windows 98



Search, Keyword, Visit Length, and Returning Visits

Many visitors to the LLM web page find the page online through one of a number of search engines. Some use the search engine even when repeating a visit while others search for keywords with the results directing them to the LLM page--whether they are interested in the subject matter or not. In the sample examined, 100% of visitors whom used a search engine had used Google to find the LLM web page. The percentage of visitors to the LLM page using a search engine to find the page was only 3%. Accordingly, the breakdown of specific keywords is reproduced in Table IX.

Table IX: Search Terms

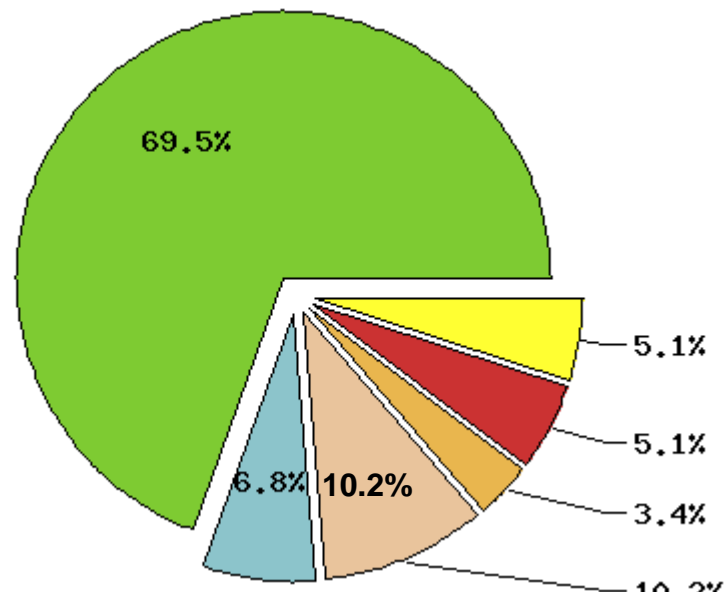
Number	Percentage	Search Term
1	33.33%	asa labor
1	33.33%	asa labor movements section
1	33.33%	labor movements
3	100.00%	

The amount of time between an access to the home page and the time they access the last is the visit length. This value is calculated by the time in real time between the entry point and when they reload a page with code. It is not possible to use the StatCounter program to determine the exit time when the visitor goes to another site, either through a link or simply in doing another task. Thus, this measure provides only a slight indication on the activities of a visitor to the site. Because the StatCounter code is only found in the main page, and time reported as visit length greater than 5 seconds would simply indicate that the user is returning to the main page and using it for navigation. This is beneficial as it gives some indication of the ease to which users navigate from the home page as an entry point. However, caution must be exercised in

interpreting the results from Table and Figure X as measures visit time in increments between reloads of the main page rather than visits in real time.

Table and Figure X: Visit Length

Visitors	Visit Length	
41	Less than 5 secs	■
4	From 5 secs to 30 secs	■
6	From 30 secs to 5 mins	■
2	From 5 mins to 20 mins	■
3	From 20 mins to an hour	■
3	Longer than an hour	■

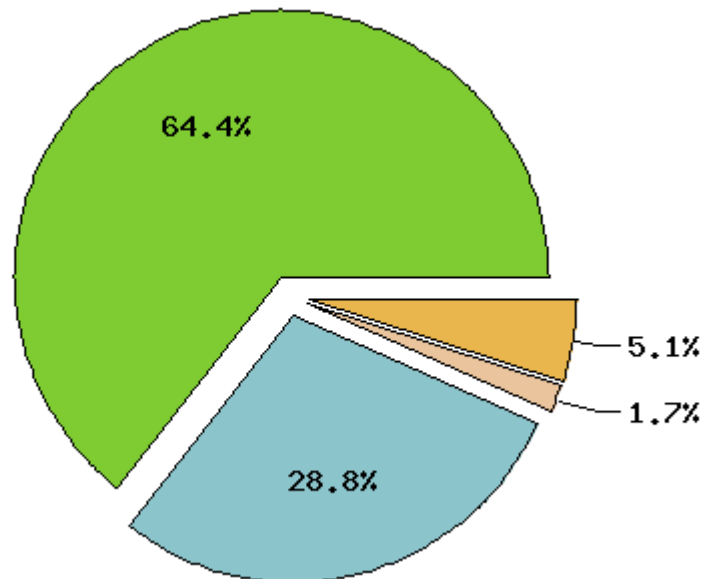


The data on a returning visit to the LLM page is dependent on the cookie on the visitor's computer. Essentially a returning visit is incremented every time a visitor returns to the LLM page. The time between visit increments is set for 2 hours between visits. The more successful web page dissemination should be demonstrated with a higher number and percentage of visitors returning to the web site. From the sample selected, it can be seen in Table and Figure XI that the percentage of returning visits is moderate at

about one-third of the visitors. Approximately two-thirds (64.4%) of the visits are made as first time visits. Of course, caution must be exercised with the numbers because a visitor has simply to delete their cookies, either directly through a browser or indirectly through an anti-spyware program, and they are recorded as a first time visitor. Nevertheless, the findings indicate promise in the attraction the LLM web page has for visitors.

Table and Figure XI: Returning Visits

Visitors	Returning Visits
38	First Time Visits ■
17	1-5 Returning Visits ■
1	5-10 Returning Visits ■
3	10+ Returning Visits ■



Visitor Geographical Origin Location

As discussed above, the StatCounter program software is developed in such a manner to provide very detailed information on visitors to the LLM web site. This

includes the DNS, IP and ISP. From this information, the visitor geographical location can be determined fairly accurately and provides a picture of the distribution and ability of the LLM web site to attract an international audience. Unlike the limitations present in the sample selected for the findings discussed thus far, two samples were taken to get a better indication of the range of geographical locations from which visitors are coming to the LLM web site.

The first sample was taken during the month of August in 2006. The results of the first sample are presented in Table XII. The second sample is from the 2008 sample. In both samples, clearly the vast majority of visitors come from the United States: 80.0% in 2006 and 69.6% in 2008. Canada also scores relatively high with Canadian visitors accounting for 9.1% in 2006 and 6.5% in 2008.² Interestingly enough, a shift away of

Table XII: Geographical Origin Location, 2006 Sample

Number	Percentage	Country Name
88	80.0%	United States
10	9.1%	Canada
2	1.8%	Brazil
2	1.8%	Unknown
1	0.9%	Austria
1	0.9%	Israel
1	0.9%	Vietnam
1	0.9%	Argentina
1	0.9%	Hong Kong
1	0.9%	China
1	0.9%	Italy
1	0.9%	Philippines
110	100%	

² It should be noted that each of the web manager and editor's computers have been excluded from all the sample data as to not effect or bias the data, results or interpretations.

visitor geographical origin from the United States and Canada to more European locations can be seen: The United States and Canada accounted for 89.1% in 2006 but only 77.2% in 2008; European countries accounted for only 1.8% in 2006 and increased to 12.0% in 2008. In both the 2006 and 2008 sample, visitors within the United States were concentrated mainly four primary areas: A ranking order of concentration reveals the Northeast Corridor (Washington to Boston), Florida, Michigan, and Southern California respectively.

Table XIII: Geographical Origin Location, 2008 Sample

Number	Percentage	Country Name
64	69.6%	United States
7	7.6%	Unknown
6	6.5%	United Kingdom
6	6.5%	Canada
2	2.2%	Turkey
2	2.2%	Australia
2	2.2%	France
1	1.1%	Greece
1	1.1%	Argentina
1	1.1%	Korea, Republic of
92	100%	

Conclusions

The findings in this study are generally encouraging, and it can be concluded that the Labor and Labor Movements web page has proven to be successful and effective. This claim can be qualified somewhat, consistent with the original goals of the web page to provide and disseminate information to the ASA Section membership. Clearly there is broad appeal during certain periods of time, particularly prior to the Annual Meetings. Yet, the visitors to the LLM web site appear to be coming from the

section membership for the most part. As well, there is an indication that individuals external to the LLM section are either coming to the web page looking for general labor movement history and information, or coming for the LLM information. The latter group would appear to be increasing in numbers and one could reasonably conclude that students, particularly graduate students, are being attracted by some of the information available on the web site (such as call for papers and employment opportunities).

Certainly there is a need for further research to obtain more information on the activities and demographic characteristics of visitors to the LLM web site. There are indications that more tracking codes present in the pages would increase the robustness of available data. Further, finding different tracking software may provide more information without increased costs. The question of costs will always be one that is hard to answer as more money spent tracking visitors would provide a very robust database from which to draw information about visitors. Ascertaining the worth of such expenditures is difficult but is not likely to provide dividends for user information. It is believed that continued research on the analysis of a text-based information academic web page has value to the academy in the research and for posterity.

It is also believed that the LLM web site will continue to play a role for disseminating information for its constituent body and will increase in broader visibility. However, any increases will be limited somewhat as evident when the web site was advertised in a free service announcement by labor magazines and newspapers such as Labor Notes, Z Magazine, and others during 2006. Broader based appeal is likely limited by two factors: Content and design.³ The LLM web page would certainly have broader

³ Research has shown that visitor traffic increases significantly if there are commercial items available, games or pornography on the site (Katz and Rice 2002).

appeal to students of labor and those involved in the labor movement (our 'subjects') if there were more resources online, such as guides, news, comprehensive research publications, and other labor materials. However, this may simply duplicate what is already available online at other, much more visible sites. Design changes may also attract new visitors with the inclusion of multimedia, particularly if a change of this type was developed around current events.

Appendix I: Visits by Month

Month	Page Loads	Unique Visitors	First Time Visitors	Returning Visitors
Jul 2008	504	323	205	118
Jun 2008	216	119	90	29
May 2008	324	228	177	51
Apr 2008	216	141	126	15
Mar 2008	264	145	123	22
Feb 2008	229	133	117	16
Jan 2008	202	132	118	14
Dec 2007	150	100	94	6
Nov 2007	226	153	138	15
Oct 2007	247	156	144	12
Sep 2007	228	151	131	20
Aug 2007	264	145	129	16
Jul 2007	273	177	149	28
Jun 2007	479	289	253	36
May 2007	217	144	134	10
Apr 2007	289	158	145	13
Mar 2007	173	103	93	10
Feb 2007	300	148	139	9
Jan 2007	503	287	252	35
Dec 2006	187	112	100	12
Nov 2006	228	151	143	8
Oct 2006	302	160	138	22
Sep 2006	277	164	144	20
Aug 2006	317	187	183	4
Jul 2006	90	60	59	1
Total	6,705	4,066	3,524	542

Appendix II: Visits by Week

Week	Page Loads	Unique Visitors	First Time Visitors	Returning Visitors
W31 2008	45	26	15	11
W30 2008	192	129	81	48
W29 2008	125	77	52	25
W28 2008	73	48	31	17
W27 2008	39	25	17	8
W26 2008	40	30	27	3
W25 2008	51	23	18	5
W24 2008	49	21	14	7
W23 2008	75	44	30	14
W22 2008	30	23	21	2
W21 2008	49	35	28	7
W20 2008	68	42	28	14
W19 2008	139	98	74	24
W18 2008	78	54	48	6
W17 2008	43	24	22	2
W16 2008	38	26	25	1
W15 2008	54	39	33	6
W14 2008	53	33	28	5
W13 2008	52	28	24	4
W12 2008	38	27	24	3
W11 2008	79	40	34	6
W10 2008	62	32	26	6
W09 2008	62	39	36	3
W08 2008	64	30	28	2
W07 2008	48	27	20	7
W06 2008	47	33	29	4
W05 2008	60	41	38	3
W04 2008	57	30	29	1
W03 2008	32	27	24	3
W02 2008	49	30	25	5
W01 2008	33	21	17	4
W52 2007	17	14	13	1
W51 2007	24	17	15	2
W50 2007	50	31	31	0
W49 2007	47	31	29	2

W48 2007	55	43	38	5
W47 2007	44	29	25	4
W46 2007	62	39	37	2
W45 2007	45	25	24	1
W44 2007	68	44	38	6
W43 2007	42	26	24	2
W42 2007	51	30	26	4
W41 2007	51	34	32	2
W40 2007	67	46	44	2
W39 2007	48	34	32	2
W38 2007	54	35	29	6
W37 2007	59	35	30	5
W36 2007	54	39	33	6
W35 2007	42	24	21	3
W34 2007	80	36	34	2
W33 2007	38	25	24	1
W32 2007	75	45	36	9
W31 2007	63	34	31	3
W30 2007	59	31	26	5
W29 2007	62	47	43	4
W28 2007	56	39	29	10
W27 2007	68	47	39	8
W26 2007	78	44	40	4
W25 2007	287	163	139	24
W24 2007	59	40	36	4
W23 2007	55	37	33	4
W22 2007	37	30	28	2
W21 2007	35	23	23	0
W20 2007	45	29	27	2
W19 2007	43	32	31	1
W18 2007	74	41	35	6
W17 2007	71	37	32	5
W16 2007	76	38	37	1
W15 2007	46	31	29	2
W14 2007	80	44	40	4
W13 2007	36	26	24	2
W12 2007	21	11	9	2
W11 2007	48	36	32	4

W10 2007	48	23	21	2
W09 2007	91	41	40	1
W08 2007	83	30	27	3
W07 2007	75	37	35	2
W06 2007	55	37	35	2
W05 2007	244	157	138	19
W04 2007	65	33	29	4
W03 2007	101	43	38	5
W02 2007	51	34	33	1
W01 2007	64	34	27	7
W52 2006	34	17	16	1
W51 2006	40	24	21	3
W50 2006	54	32	28	4
W49 2006	43	28	24	4
W48 2006	58	35	33	2
W47 2006	71	53	50	3
W46 2006	52	30	30	0
W45 2006	38	27	25	2
W44 2006	34	25	22	3
W43 2006	49	31	29	2
W42 2006	115	51	48	3
W41 2006	68	34	28	6
W40 2006	56	32	24	8
W39 2006	50	32	28	4
W38 2006	70	39	38	1
W37 2006	81	43	33	10
W36 2006	71	45	40	5
W35 2006	53	31	30	1
W34 2006	64	35	32	3
W33 2006	87	42	42	0
W32 2006	89	71	70	1
W31 2006	39	22	22	0
W30 2006	30	15	15	0
W29 2006	52	37	36	1
W28 2006	3	3	3	0
Total	6,674	4,047	3,514	533

Sources Cited

- Huntington, Paul, David Nicholas, Hamid R. Jamali, and Anthony Watkinson. 2006. "Obtaining Subject Data from Log Files using Deep Log Analysis: Case Study OhioLINK." *Journal of Information Science* 32, 4:299-308.
- Katz, James E. and Ronald E. Rice. 2002. *Social Consequences of Internet Use: Access, Involvement, and Interaction*. Cambridge, MA: MIT Press.
- Li, Xiaodong. 1999. "Library Web Page Usage: A Statistical Analysis." *The Bottom Line: Managing Library Finances* 12, 4:153-159.
- Nicholas, David, Paul Huntington and Hamid R. Jamali. 2008. "User Diversity: as Demonstrated by Deep Log Analysis." *The Electronic Library* 26, 1:21-38.
- Nicholas, David, Paul Huntington, Hamid R. Jamali, and Anthony Watkinson. 2006. "The Information Seeking Behaviour of the Users of Digital Scholarly Journals." *Information Processing & Management* 42, 5:1345-1365.
- Welch, Jeanie M. 2005. "Who Says We're Not Busy? Library Web Page Usage as a Measure of Public Service Activity." *Reference Services Review* 33, 4:371-9.