# Mapping the blogosphere

Professional and citizen-based media in the
global news arena

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ABSTRACT

Globalization and the internet have created a space for news and political discourse that
overrides geography and increases opportunities for non-mainstream, citizen-based
news sources. Drawing a distinction between emerging citizen and professional
media, this study examines one rapidly expanding and increasingly influential citizen
news source – weblogs. We analyzed the linking patterns, the online network led to
by six of the most popular news and political weblogs to study their relationship to
other weblogs and the traditional professional news media in the USA and internation-
ally. Findings suggest a more complementary relationship between weblogs and tradi-
tional journalism and less echo-chamber political insularity than typically assumed. The
blogosphere relies heavily on professional news reports and half of its linked-to sites can
be considered non-partisan.

KEY WORDS ▪ content analysis ▪ globalization ▪ internet ▪ journalism
▪ network analysis ▪ news sources ▪ online news ▪ professional ▪ weblogs

## Introduction

The globalization process has brought greater transnational connectedness,
intersecting networks of economic, political, and cultural activity that David
Held has called 'overlapping communities of fate' (2004: x). The deterritoria-
lized and globalized online zones for news and political discussion have led to
important new questions about the future of traditional news media and the
shape of political discourse. One manifestation of this new level of connectivity
is the relatively recent phenomenon of web-based personal 'logs', also called

weblogs or 'blogs', the online postings of comments by citizens, groups, and news professionals, outside of the normal venues provided by the mainstream news organizations. These weblog sites, whether aligned with an individual writer or larger cyber community, have risen dramatically – doubling in the span of several months to some 20 million blogs tracked at this writing (source: Technorati.com).

Public attention has focused particularly on those weblogs concerned with news and public affairs as a new political force. They have claimed credit, among other things, for helping disclose irregularities in reporting by CBS News and for revealing scandalous remarks by Senator Trent Lott about the segregated South. This emerging anecdotal lore of the impact of blogging has led some to suggest that the online army of bloggers will supplant the work and value of traditional journalists. Others fear that these blog communities will increase the political polarization of the American public, as citizens turn to those new online forums that suit their affinities – that communities may overlap without intersecting.

The present study analyzes these patterns in the emerging weblog zone, especially the highest profile area concerning news and political debate, and examines the relationships among the citizen-based and more traditional professional journalistic components of that zone. Specifically, we content analyze six of the major news and political blogs, those sites that generate the most traffic and links within the online community. We also trace the sites they link to, including not only other blogs but also traditional online news media sites, and the manner in which they refer to them. This gives us a picture of one area of the vast web-based news and political commentary network formed by these interlinking sites. As the news arena expands globally we are also interested in the international and ideological pattern of linking, and whether blogs engage a cross-national dialog across political lines.

## The global news arena

The emerging world of blogs must be understood within the larger context of a changing global news arena, in which the public naturally seeks perspectives beyond one specific locality and nation (e.g. Croad, 2003). The migration of news and information to an online platform has disrupted old patterns of reading and changed the relationship between audiences and news providers. The internet has increased the speed, reach, and comprehensiveness of journalism available to the public and lowered the cost of entry to anyone seeking to participate. Thus, the online environment 'deterritorializes' news, such that the user,

creator, and news subject need no longer share the same national frame of reference.

In breaking down geographic limitations on access to information, the internet – and the world-wide web-based journalism and other communication it makes possible – undermine the historic relationship between the press system and the national community. Morris and Waisbord (2001) observe that transnational forms of political participation have moved to a global public sphere. And as Anthony Giddens (2000) argues, the 'intrinsically open frame-work of globalization' has a natural relationship with democracy, leading many to attach great hopes to the internet's potential for advancing more engaged and active citizenship around the world. Blogs are taking their place among these other technologies to support new forms of community. World publics organize around issues and political affinities rather than geographical proximity. The extent and the shape of this organization, however, remain unclear.

## Shifting boundaries in the blogosphere

The concept of 'blogosphere' recalls the public sphere idea of Habermas (1989), a provocative if elusive way to think about the social 'geography' of public communication – the realm of reason, argument and dialogue where public opinion emerges. Journalism has naturally been central to this process, with Carey (1989) suggesting that journalism ought to help encourage and amplify the conversation of the public. Thus, the public sphere is often thought to be mediated space, with the news media providing this visible forum of public voices. In this regard, the range of sources and perspectives permitted by profes-sional news gatekeepers establishes the limits of the public sphere they manage. Alternatively, we may conceptualize the blogosphere as a conversation distribu-ted more broadly across citizens and journalists. Where traditionally journalism was charged with monitoring and reflecting public expression, citizens can now hold those conversations among themselves and, in a new twist, amplify the 'conversations' among journalists.

Research has begun to focus on how news practices and professional iden-tity are changing in the wake of new technological capabilities (e.g. Allan, 2002; Deuze, 2004). Deuze (2003) observes that when journalism goes online it shares aspects of hypertextuality, multimediality and interactivity, changing and broadening its basic nature. He goes on to show how these changes range from mainstream news sites that simply transpose online their closed, tradi-tional professional culture and relationship to the audience, to sites that encourage a more open 'dialogical' journalistic culture – an aspect that the

blogosphere concept captures. Admittedly, technology has altered the nature of the profession itself, but more broadly journalism has been distributed and interlinked more fluidly with citizen communication. The blogosphere provides an interweaving of these different locations as it pushes users to a network of information, views and perspectives, thus bringing a broader journalistic conversation to life.

So, globalization and technology have produced a broader and more fluid journalistic conversation, a new global public sphere (Habermas, 1992) with shifting boundaries. As we examine a blogosphere network, our research questions are related to three particular boundaries: professional, political, and geographic, for which we provide some background below. The professional shift requires better understanding of the distinction between professional and citizen-based communication, and how they fit together to constitute the emerging blogosphere. Political shifts lead us to examine the developing cross-linking based on ideological affinities, often referred to more negatively as 'echo chambers'. And, given the deterritorialization of communication and a more globalized public sphere, we wish to examine relationships in the blogosphere that cut across national boundaries.

### Professional and citizen media

The most important conceptual boundary highlighted in the blogosphere is that between 'professional' media and more informal, citizen-based, non-traditional forms. The blogosphere is often regarded as set apart from traditional 'mainstream' journalism, but it may also be seen as enveloping both professional and citizen 'amateur' journalism in a larger network. By 'professional' we refer to a combination of features including a claim to 'authority' and the command of economic resources available to media organizations. The professional, traditional media draw their institutional authority and value from their casting of their work within the norms of journalism. That usually means professional paid staff, who are recognized officially for access to events as 'the press'. These staff are experienced in the journalistic craft, and many have formal training. Subscriber and advertising support provide traditional media with the means to widely distribute their product. Given the adherence to professional norms, traditional media cultivate an institutional image and reputation, and at least in the USA they clearly delineate news and opinion. The mainstream press falls within this category, as would journals of opinion such as *The Nation,* which clearly identifies its ideological position, but its journalists engage with others on a similar professional footing.

There are more 'walls' around professional content, with visitors often required to register and/or pay for the service and with less linking off site.

The professional organization exercises greater control over online content, with less interactivity and less reader-submitted content. Internet use for news and information is still dominated by the traditional, 'professional' media (e.g. MSNBC, CNN, AOL News, Gannett Newspapers, NYTimes.com, USATODAY. com, and BBC News, the most popular non-US-based site). Of course, the popular Yahoo! News and now Google News portals serve as news aggregators, largely assembling material from professional news organizations – both big and small – which further works to open up news content on the web (Lasica, 2004). News providers, which previously might have preferred walling off their content, are now taking steps to enhance their currency by making their stories available to news summaries and blogs that point to it. Citizen-based media originate from individuals and public interest groups seeking to express an idea or position within the public discourse. Its producers need not adhere to a professional journalistic code as a requirement for participation. By definition, these non-professional media command less commercial viability and may be based on a non-profit, subsidy, or no-revenue business model. They only require a motivated individual or group willing to speak to a public. They help create a more interactive online conversation on personal websites, non-governmental organization (NGO) websites, chain emails, Usenet discussion groups, and message boards. (Since this study was originally begun, professional outlets have begun to feature more use of interactive forums, such as message boards.) These media intensify the networked quality of the news arena. 'Higher interactivity' suggests more synchronous communication, such as a section for comments, allowing the audience to correspond in close to real time with the content producer or with each other. In less interactive 'professional' media, other than the occasional online interview/chat form where audience members can submit questions, the reader can at best email journalists. And the 'nonpublic' quality of this communication lessens the chances of getting a response. As the most rapidly growing citizen-based medium, blogs provide the connectivity lacking in the professional media. The ease of use, low barriers to creation and maintenance, dynamic quality, easy interactivity, and potential for wide distribution distinguish weblogs from other online citizen-based media discussed above.

Although often cast as some kind of counter-sphere competitor to the traditional news media, the blogosphere can be viewed as complementary – supplementing and interconnecting the work of professional journalists. The ease of connecting online may in fact lead to more engaged readers and bring the work of journalists and commentators to a broader audience. With email, newsgroups, and blogs, stories from news organizations can be copied, distributed, annotated, and engaged in ways that extend their life and impact far beyond initial publication. In her analysis of blogs targeting the war in Iraq, for

example, Wall (2005) found that these 'warblogs' relied heavily on the mainstream US media for up to half of their links, with surprisingly little reference to alternative media.

Ultimately, bloggers compete for 'authority', not so much in destroying what was closely held by professionals but by redeploying it across a broader area. Mainstream news reports can now be rapidly challenged, not only by other media but by the wired audience, which can engage such reports through online communities – an extended communication infrastructure that constitutes the global new arena. It is in the cross-referencing, pooled consensual understandings, in the interactive 'conversation' that authority now resides.

### Political shifts

The irony of globalization is that while seeming to breed global uniformities it also makes smaller cultural, political, and ethnic communities more viable. The online world, while making possible easy exchange among citizens and journalists, also supports the creation of balkanized subgroups that form around any idea of interest. These cyber-communities raise similar issues of political insularity: the ideological equivalent to 'ethnic cleansing'. If reasoned dialog among perspectives marks a healthy community and public sphere, the potential for 'link inbreeding' to produce such echo chambers is worrisome.

Online overlap is often an automated media-driven process through links, recommendations, and blogrolls (lists of permanent links to other websites/ weblogs on homepage of a weblog) that will send readers to a variety of sources based on the interests they express. The offline audience needs to pull from other sources, while the online audience is pushed to them. Amazon's online book site, for example, generates recommendations for purchasers that point to books along similar lines, websites link to sources that support the site's argument, and blogrolls typically follow a conservative/liberal litmus test. One study of this structure suggests a polarized linking pattern, with conservative and liberal blogs linking most to their own communities (Adamic and Glance, 2005; Welsch, 2005). Wall (2005) also found that Iraq war bloggers often linked to each other (40.9%) in a reciprocal cycle of 'mutual affirmation'. Even when professional journalists blog, Singer (2005) found that they retained a certain professional insularity, linking mainly to other journalists.

### Geographic boundaries

Finally, we are interested in the potential for the online world to transcend national boundaries. For example, *Guardian Unlimited* is the most successful newspaper site in the UK, topped only by BBC News. Almost a third of its several

million unique visitors per month, however, are from outside the UK, especially the USA. *Guardian* journalists willingly provide exclusive online content to the site, partly because their online work generates such enormous response from the countries from which they report (Bell, 2004). News portals can be highly international in their selections of news. Thus, we would expect that the open nature of the internet world inevitably leads to cross-national connections and a lessened national 'walling' of the information arena, particularly in the blogosphere. Although our focus is on US-based blogs, readers of these blogs and sources for them can be anywhere.

## Research questions

To examine these boundary concepts and other patterns they suggest, we explore a blog-based network including the references within it to professional news and other sites. We propose the following research questions:

**R1:** To what extent do blogs link to the professional news media, and how are those references characterized?

**R2:** How is political affiliation of blogs related to their linking to professional news media?

**R3:** How is political affiliation of blogs related to the affiliation of their linking choices?

**R4:** How is political affiliation of blogs related to their linking to international sites and authors?

## Method

### The blog map selection scheme

Given our primary focus on news and politics, we began with those weblogs devoted primarily to those topics, selecting ones from both liberal and conservative perspectives that have established an authoritative reputation in the blogging community and serve in our view as a gateway to a larger network. By restricting ourselves to the most popular sites we attempt to make some generalizations about their practices. In any case, ratings show a major drop-off in traffic beyond the highest ranked weblogs (50 top blogs have been found to account for 50% of the links; Shirky, 2003), so describing this handful is a good first step in identifying patterns of significance in the online world. We also chose only those blogs associated with an individual or small group, rather than a 'group' or community-based blog. Although the online world changes rapidly with traffic shifting quickly in and out of different sites depending on the topic and notoriety of the issue, the blogs we chose have remained fairly

stable with a strong reputation in the blogging community. Based on Technorati ratings (current ranking at this writing shown in parentheses), we identified six of the top rated news-related weblogs. As liberal sites we selected Talking Points Memo (9), Atrios (13), and Daily Kos (3); conservative sites are Instapundit (7), Andrew Sullivan (14), and Little Green Footballs (15).[1]

### Talking Points Memo

Among the most popular bloggers, Joshua Micah Marshall is (along with the conservative Andrew Sullivan, below) also enmeshed in the mainstream media. He is a freelance correspondent for several liberal publications and was an editor for the *American Prospect*. Marshall is also the most traditional – referring here to the closed, top-down structure of his site – of the top-ranked bloggers. Based in Washington, DC, with extensive contacts and readers beyond the blogging world, Marshall is a rare example of a blogger who contacts sources of stories and does first-hand reporting. While his weblog follows blogging conventions of updating throughout the day in a more personal style, he has typically not participated in following and linking to other weblogs (although since this study began he has added a section, 'TPM Café' that does link to other blogs and reader blogs).

### Atrios

Duncan Black, the formerly anonymous blogger Atrios, is one of the most popular left-wing bloggers, and as enmeshed in the liberal weblog world as Instapundit (below) is among conservatives. Black, an attorney, is able to maintain a high level of interactivity on his weblog (also called Eschaton), mainly by providing a section at the end of each post with comments often numbering in the hundreds. Like Instapundit there are frequent posts, often merely a brief excerpt from a weblog or website and a link to that source, with the occasional longer essay-type post. Thus, Atrios and Instapundit serve mostly as traffic cops for the weblogs on their respective ends of the political spectrum.

### Daily Kos

Kos is the most interactive of all the weblogs studied here, often operating more like a group weblog. Maintained and mostly operated by political consultant Markos Moulitsas Zuniga, Kos has become one of the most popular weblogs and an online community forum for liberal viewpoints. Although he and a handful of other bloggers provide the front-page posts, the site allows all registered users to have their own 'diaries' – personalized versions of Kos where

users can maintain their own weblogs. These diaries often provide fodder for the front-page posts.

### Instapundit

Glenn Reynolds, a law professor at the University of Tennessee, started his weblog as a supplement to his class on internet law. After September 11 it became a central hub in the weblog world, and remains at or near the top of several weblog traffic ranking systems. Instapundit is a leading example of a 'pure' blogger, since he is not a full-time or freelance journalist. Due to the high level of traffic to his site, Reynolds does not have a comments section. But his posts, which are generally conservative, often make brief references to other weblogs that do have comments and thereby offer interactivity by extension.

### Andrew Sullivan

Sullivan was one of the original bloggers, a successful conservative freelance journalist and a vocal proponent of the weblog medium from its infancy. He also was one of the first to successfully find ways to fund his weblog while remaining independent. Where most bloggers are researchers, finding interesting pieces of information in various forms of media and referring their readers to them, Sullivan is mostly a writer. His weblog has very little interactivity beyond a letters page.

### Little Green Footballs

Started by web designer Charles Johnson in early 2001 and typically referred to as LGF, it uses a core group of conservative front-page posters and hundreds of user comments to drive its coverage. This level of activity has allowed the weblog to help generate stories like the Dan Rather 'memogate' of 2004. However, it does not contain the user diaries and user-generated open threads that give Kos a high level of user control. Its posts are typically a collection of excerpts from weblogs and websites with brief commentary at the beginning.

## Unit of analysis

Describing internet web networks presents challenges for content analysis. Each node in the network is there because it links to another or is linked to by another, or both. The network is dynamic as new links form, old ones decay, and traffic moves quickly to cluster around the most popular locations of the

moment. Putting boundaries on this network for the purpose of coding requires defining key network elements. Within the universe of weblogs, the most basic unit is the 'post', an individual comment logged in by a submitter with identifying information, date and time of logging. The blogosphere may be described as 'post-centric' in that it is these posts to which others respond, add, reject, or reference. A stable of 'static' links (blogrolls) are often available on sites on a more or less permanent basis, but the posts are the 'dynamic' elements that form the online conversation. They accumulate as the week goes on, to be archived automatically on the site. (A popular site such as Instapundit.com can have between 150 and 200 separate posts per archived week.)

Traditional online news sites differ in structure from the weblogs, using the story as the basic unit, updating and changing these stories from one hour to the next. These story units do not accumulate as do posts on weblogs. They do not typically embed links to other stories and locations off site, unless they are to previous stories in the site's own archive. Although blogs and news sites are distinctly different, we include both in our analysis as 'linking units'. For example, two blog postings may be indirectly linked by virtue of their links to a common news site story (linking unit). The news story itself does not link to the two blogs, but it serves as a common point of (linking) reference for the blog posts (see Reese et al., 1994, for a discussion of this rationale). The sampling approach used here may be termed a quasi-network analysis (or a network-informed content analysis); the network is approximated cross-sectionally in a conventional two-dimensional coding matrix with a primary purposive selection of blog posts representing the basic coding units, with sites to which they linked associated with them as additional variables. So, we chose the items for content analysis from the type of network we specified, but did not examine network-level measures such as centrality and density.

## Coding procedures: time frame

Within each blog selected we identified recent archived content in the first full week in February (6 to 13) 2005 for coding. We assume that the selected archived week was roughly comparable from one blog to another. The number of posts will vary across each blog, but this allows us to describe the actual contribution of each to the overall network and their relative patterns with respect to linking. In other words, the census of these posts means that the more frequently posting blogs are naturally better represented in the blogosphere and thus in our network. The week selected did not include any single major news stories that might have suggested it was atypical, such as the CBS *60 Minutes* 'memogate' that dominated blog discussion in the second half of 2004. Topics ranged from the status of the war in Iraq to the Bush administration's proposed

changes to Social Security. But there were two developing stories at the time where blogs did play a significant role: the resignation of CNN executive Eason Jordan over his controversial allegations that the US military's targeting of journalists in Iraq and the scandalous revelations of Jeff Gannon about his White House press credentialing following an earlier career as a gay escort. Admittedly, bloggers were in the news during this time, but that seemed to be the case in any number of weeks in 2005. In any case, it was important to iden-tify a recent continuous week of posts when the archived material was still accessible and the links still active.

We exclude those links that are included as pro forma entity references, non-dynamic sites associated with the formal entity mentioned (often a proper noun), such as a congressman's site or a corporate home page. These sites, while referenced by a link, do not advance the dialogue embedded in the network. That is, nothing is explicitly 'said' at these sites pertaining to the issue leading to their inclusion. In such a case, the linker is not linking because of what is said, but as indeed a 'pro forma' and relatively mindless link (the cyber equivalent to a proper noun). If however, the link was to a recent speech the Senator had given on a section of that website, we would have coded it.

We identified the characteristics of the network formed by the outbound links from the primary blogs. Within this selection of content, the first level of the network is fixed by our selection of the primary weblog sites. We continued then to a second level represented by all those posts and sites (if any) referred to by the posts in the first level – then to the third level, those sites and posts (if any) referenced by linking units in the second level. In the first and second levels we coded only the first two links within each unit. Thus, each first-level original blog-post may contain up to six additional post/sites associated with it (see Figure 1). In each case, the second and third-level linking units are referred to by the 'in-bound' linker, and we characterized this tone of linking (supportive, etc.) as a feature of the referred-to linking unit.[2]

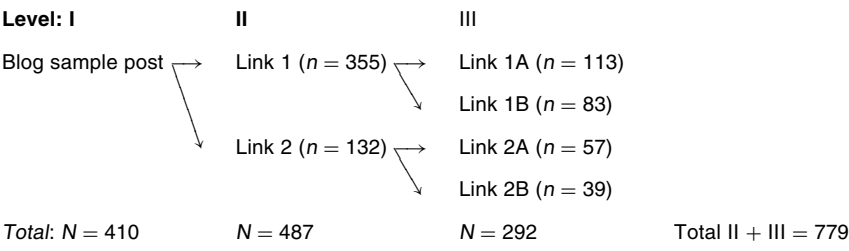| Level: I | II | III | |
|---|---|---|---|
| Blog sample post → | Link 1 ($n = 355$) → | Link 1A ($n = 113$) | |
| | | Link 1B ($n = 83$) | |
| | Link 2 ($n = 132$) → | Link 2A ($n = 57$) | |
| | | Link 2B ($n = 39$) | |
| *Total*: $N = 410$ | $N = 487$ | $N = 292$ | Total II + III = 779 |

**Figure 1** Blog network diagrm and number of cases observed

Although they may be regarded as part of an overall network, we do not concern ourselves with post 'comments'. They are positioned as a link following the post, but conceptually represent 'in-bound' on-site links, and do not broaden the network beyond that specific site community (they are reachable only on the site itself).[3] In our analysis, the primary structure is established by the main blog posters and the sites to which they refer. It is this structure that drives the 'in-bound' comments and not the other way around.

### Coding procedures: measures

In coding the material, the authors reviewed a sample of content and developed a measurement scheme. A sample of posts and sites was selected and checked by two of the authors for inter-coder reliability using the Holsti formula. The posts to be coded were divided evenly across the six blogs so each coder had an evenly distributed mix of content. Most measurements are straightforward and described below. The coded measures include the following:

#### Unit type

Each blog post was described as providing a general comment ('here's something interesting' or other brief housekeeping comments), analysis, or first-hand observation or reporting (such as a blogger on the scene in Iraq) (inter-coder reliability=.72). We coded non-blogs as news stories, opinion/ analysis/commentary, or documentary materials (speeches, texts, audio-video, documentation, including press releases) (.85).

#### Site type

Each linking unit (blogs and news stories) was coded based on the nature of the site on which it resided and the type of information. These were divided primarily into blogs and professional media sites (.85).

#### Tone

We coded the way a linking unit was referred to by the 'sender'. We characterized these references as a simple referral to this location (for fuller documentation, etc.), a supportive, reinforcing referral ('here's an excellent post'), or a negative referral (attacking the source, undermining, or critical deconstruction, e.g. 'Tim Russert is a moron'). To be a negative reference the post attacked the source, not the message (.77).

*Site/author*

We attempted to identify the institutional affiliation of the author and the political leaning of each site (.90;.80). Some were not obvious in their ideology or claimed to be non-partisan, but we attempted to describe them as broadly liberal or conservative (or 'other political' if opinionated but not easily classified on the left–right spectrum, e.g. libertarian). Others we coded as non-political if they clearly were.

*Geographic location*

We attempted to identify where a writer was based and where the organization or server was located. We reserved the 'global' category for those new organizations gathering and distributing information worldwide (e.g. Reuters).

## Results

The overall pattern of posts in our sample of six major blogs is described in Table 1. We found a total of 410 posts across the six, with Instapundit logging the most (114) and Andrew Sullivan, on partial hiatus that week, the least (23). These blogs all had significant numbers of links to other sites (only 34 posts had no links at all), with 154 (38%) having two or more links, supporting our treatment of these blogs as components of and gateways to a larger cyber-network. In describing the six, we first distinguished between brief, general comments ('It never ends', with a reference to a news article), analysis (any attempt to examine or interpret information, often in reaction to one or more news clips), and first-hand observation (bloggers in Iraq reporting on developments, making calls, speaking to sources directly, etc.). Much has been said about the ability of bloggers to provide additional facts, including the CBS News case in which bloggers experimented with different type fonts to claim that memos used in a story could not have been authentic. Others have pointed out that citizen bloggers are unable to deal with stories requiring journalistic initiative and empirical investigation (bloggers, for example, were not much assistance in confirming the absence of weapons of mass destruction in the lead-up to the Iraq war). And indeed, we found very little of this kind of original information. Most blog posts either assemble material from elsewhere, with only general comments (38.5% of posts), or conduct some analysis on such material (60.5%), but we tallied only a handful of posts that could be said to be on-the-scene observation ('I'm in Iraq watching election returns on TV').

**Table 1** Type of posts on selected blogs

| | Liberal | | | Conservative | | | Total |
|---|---|---|---|---|---|---|---|
| | Talking Points Memo | Atrios | Daily Kos | Instapundit | Andrew Sullivan | Little Green Footballs | |
| General comments | 32.5 | 36.1 | 14.8 | 57.9 | 26.1 | 38.7 | 38.5 |
| Analysis | 66.3 | 63.9 | 85.2 | 40.4 | 73.9 | 60.0 | 60.5 |
| Firsthand observation | 1.2 | 0 | 0 | 1.8 | 0 | 1.3 | 1.0 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| N | 83 | 61 | 54 | 114 | 23 | 75 | 410 |

As discussed earlier, our coding approach was to specify a network defined by the links of the six original blogs to other sites (up to 2 coded per post), and the links of those sites to other sites (up to 2 coded) (see Figure 1). Thus, for every original post theoretically up to six associated 'linking units' could be coded (possible *N*=6 x 410). Not every post, however, included two links, and some linking units were dead ends (e.g. unlikely-to-link news stories or documents), so our units of analysis for further tables in which we collapse Levels II and III is over 700 (the exact number depending on missing data). These linking units (to which the original six blogs act as a gateway) define 'the network' which is referred to below. Unless otherwise noted, our research questions below refer to these units in the network – not including the original posts in Level I.

**R1:** To what extent do blogs make reference to the traditional news media, and how are those references characterized?
**R2:** How is political affiliation of blogs related to their reference to traditional news media?

Table 2 shows the distribution of sites included in this network. Major categories here are summarized into weblogs, professional media, official sites (including government, and 'governing' party sites), corporate, and other public interest or citizen-based sites.[4] Although substantial, blogs themselves play the lesser role in terms of what is linked to. That is, 33.5 percent of references are to other blogs. Close to half (47.6%) of references are to the professional news media (whether news-editorial, policy, or opinion journals), with most of those being to news and editorial sites (38.6%), either via a news portal such as Google or directly. Political affiliation is not strongly related to linking here. Conservative blogs refer more often to blogs than liberal ones do (33.6% vs 24.9%), but otherwise the pattern is similar across the six gatekeeper blogs.

Table 3 shows the nature of the linking content (beyond just describing the site itself), by classifying this information into blog-style material, news stories, news analysis and opinion, or various documentation references (legal case texts, press releases, speeches, original think-tank reports, etc.). This provides a similar pattern to that discussed earlier, with significant reliance on the professional news media, both straight news stories (28.8%) and opinion (such as the *Wall Street Journal* OpinionJournal.com) with 15.4 percent of references. The references to blogs is higher here (45.9%) than in Table 2. This reflects the blurring of blog and nonblog information and captures the links to blogs hosted by mainstream media sites (MSNBC, etc.). So, for these measures it is clear that, contrary to popular speculation, traditional news media and professional journalists play an important role within this network.

**Table 2** Type of sites in network

|  | Liberal | | | | Conservative | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
|  | Talking Points Memo | Atrios | Daily Kos | Total | Instapundit | Andrew Sullivan | Little Green Footballs | Total | |
| Web blog | 25.6 | 25.8 | 22.8 | 24.9 | 44.3 | 18.2 | 36.1 | 33.6 | 33.5 |
| News & editorial | 48.9 | 27.4 | 46.7 | 40.7 | 32.2 | 45.5 | 46.2 | 38.5 | 38.6 |
| Policy | 1.5 | 2.4 | 2.2 | 2.0 | 3.2 | 4.5 | 3.4 | 2.7 | 2.7 |
| Opinion journal | 0.8 | 13.7 | 3.3 | 6.0 | 8.0 | 0 | 4.2 | 6.3 | 6.3 |
| Citizen public interest | 6.0 | 9.7 | 5.4 | 7.2 | 4.2 | 18.2 | 2.5 | 5.6 | 5.6 |
| Official government | 7.5 | 15.3 | 9.8 | 10.9 | 1.4 | 9.2 | 1.7 | 5.9 | 5.9 |
| Corporate, University | 5.3 | 3.2 | 6.5 | 4.9 | 3.8 | 4.5 | 1.7 | 4.0 | 4.0 |
| Other | 4.5 | 2.4 | 3.3 | 3.4 | 3.1 | 0 | 4.2 | 3.3 | 3.3 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| N | 133 | 124 | 92 | 349 | 289 | 22 | 119 | 779 | 779 |

**Table 3**  Type of link information in network

| | Liberal | | | Conservative | | | Total |
|---|---|---|---|---|---|---|---|
| | Talking Points Memo | Atrios | Daily Kos | Instapundit | Andrew Sullivan | Little Green Footballs | |
| Blog link | 30.2 | 43.5 | 34.9 | 60 | 21.1 | 42.9 | 45.9 |
| News story | 45.7 | 20.0 | 36.0 | 18.2 | 21.1 | 42.9 | 28.8 |
| Opinion, analysis, commentary | 14.7 | 18.3 | 10.5 | 18.5 | 15.8 | 8.6 | 15.4 |
| Speech, text, video, audio | 9.5 | 18.3 | 18.6 | 3.3 | 42.2 | 2.7 | 9.9 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| N | 116 | 115 | 86 | 275 | 19 | 105 | 716 |

We next considered *how* these blogs linked, when they did link, to other sites (Table 4). The main referral style was to simply reference the link (LGF: 'North Korea says it has nuclear weapons', followed by a Reuters clip, or an oblique commentary: 'Sanity prevails in Germany: Germany rejects call for Rumsfeld War Crime Probe'), with 84.2 percent of cases. This pattern was consistent across the links associated with the six blogs. In other instances, the post would be explicitly supportive ('Don't miss this wonderful take-down of the administration's torture memo'), or attacking the source ('Tim Russert is a moron'). We had expected that the conservative blogs, in particular, would engage in more explicit criticism of the mainstream press, deconstructing articles, and challenging reportorial techniques. There may have been several references critical of the information or the quoted newsmaker (e.g. Andrew Sullivan: 'A pretty amazing piece of dialogue at a Council on Foreign Relations meeting . . .') but little direct attack on sites or news organizations themselves.[5] So professional news is referenced often and, when it is, typically taken at face value and used to develop larger points.

We next personalize the network by considering who is speaking within these various sites. Some professional journalists, for example, have their own blogs (*Newsweek*'s Mickey Kaus's 'the KausFiles'), and some bloggers have their own space within a more professional media site, such as Slate (GlennReynolds.com, the Instapundit, on MSNBC's Slate). Table 5 shows that almost half (43.7%) of the authored 'units', whether newstories or blogposts, are citizens, while almost the same proportion (41.2%) are affiliated with the professional news media. The rest are classified as government officials, business, or public interest group sources, and there is little referencing to these sites. Instapundit, the traffic cop of the blog world, refers often to fellow bloggers and as a result leads to a subnetwork of majority citizens (57.9%). Josh Marshall's more reporting-based TalkingPointsMemo, on the other hand, makes relatively less use of blogs and their citizen authors. Otherwise, there is not a dramatic difference by political ideology between the three conservative and the three liberal blogs. Across the board, they make significant use of professional news media and affiliated authors.

**R3:** How is political affiliation of blogs related to the affiliation of their linking choices?
**R4:** How is political affiliation of blogs related to their linking to international sites and authors?

In research questions 3 and 4 we sought next to examine the echo-chamber insularity issue, whether blogs work to open up space across both political and national boundaries. Table 6 shows the political affiliation of the linking units that our original six blogs led to. Here there is perhaps a predictable pattern of an echo-chamber, with the liberal blogs being more likely to link to liberal

**Table 4**  Style of reference to sites in network

| | Liberal | | | Conservative | | | Total |
|---|---|---|---|---|---|---|---|
| | Talking Points Memo | Atrios | Daily Kos | Instapundit | Andrew Sullivan | Little Green Footballs | |
| Simple referencing | 92.6 | 78.0 | 80.2 | 86.2 | 78.9 | 80.6 | 84.2 |
| Supportive, reinforcing | 5.8 | 9.3 | 11.6 | 9.1 | 15.8 | 11.1 | 9.4 |
| Attacking, undermining | 1.7 | 12.7 | 8.2 | 4.7 | 5.3 | 8.3 | 6.5 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| N | 121 | 118 | 86 | 275 | 19 | 108 | 727 |

Table 5  Authors of site information in network

| | Liberal | | | Conservative | | | Total |
|---|---|---|---|---|---|---|---|
| | Talking Points Memo | Atrios | Daily Kos | Instapundit | Andrew Sullivan | Little Green Footballs | |
| Citizen | 25.2 | 41.4 | 33.7 | 57.9 | 31.6 | 40.6 | 43.7 |
| Professional media-affiliated | 53.8 | 31.9 | 45.3 | 34.8 | 31.6 | 51.9 | 41.2 |
| University affiliated | 0 | 0 | 1.2 | 2.9 | 5.3 | 0 | 1.4 |
| Government official | 14.3 | 15.5 | 10.5 | 1.1 | 26.3 | 2.8 | 7.6 |
| Corp., business leader, spokesman | 1.7 | 0.9 | 1.2 | 0.4 | 0 | 0 | 0.7 |
| Public interest, NGO, think tank | 5.0 | 10.3 | 8.1 | 2.9 | 5.3 | 4.7 | 5.4 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| N | 119 | 116 | 86 | 273 | 19 | 106 | 719 |

**Table 6**  Political affiliation of sites in network

| | Liberal | | | Conservative | | | Total |
|---|---|---|---|---|---|---|---|
| | Talking Points Memo | Atrios | Daily Kos | Instapundit | Andrew Sullivan | Little Green Footballs | |
| Liberal | 31.5 | 40.2 | 29.0 | 6.4 | 9.1 | 5.2 | 18.7 |
| Conservative | 8.5 | 11.5 | 2.4 | 33.9 | 22.7 | 32.2 | 22.0 |
| Other political | 0.8 | 6.6 | 7.5 | 19.1 | 4.5 | 8.7 | 10.6 |
| Non-partisan | 59.2 | 41.8 | 58.1 | 40.6 | 63.6 | 53.9 | 48.8 |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| N | 130 | 122 | 93 | 283 | 22 | 115 | 765 |

sites (whether a liberal blogger or commentary in a professional journal of opinion, e.g. *Reason*, *American Prospect*). Conservative blogs led to conservative voices. However, we classified almost half of the sites (48.8%) all six blogs led to as non-partisan, or non-political, in which we included much of the professional news media (the *Wall Street Journal's* OpinionJournal.com, for example, would be coded as 'conservative'). Thus, although there is a partial echo-chamber, these blogs serve to direct readers to a broader base of news and commentary that is more difficult to pigeonhole ideologically. If including the 'other political', we might conclude that some 60 percent of links are not to one's own political pole.

Finally, we considered whether blogs encourage lesser national insularity, and the extent to which they connect to the larger global news arena. In principle, blogs may link to any site on the internet without regard to national location. The example of *Guardian Unlimited* was mentioned earlier as a popular site, and the BBC.com registers significant US traffic. Although not always easy to pin down, even in cyberspace we can identify in general whether a site is US based or US oriented or not (e.g. Europundits), and certainly in the case of online newspaper sites (e.g. *The Scotsman's* news.scotsman.com). We also recognized that a reporter may be working in Iraq but posting to a US newspaper or global news agency, such as Reuters. So we tried to distinguish between the location of the site-server and the location of the poster. Language issues mean that in practice the UK will be a favored non-US reference, but even those links were rare in our sample. Links to US sites were the rule in 92.7 percent of our cases. A similar pattern was found when we attempted to identify the location of the authors (92% were US). Clearly, US blogs have not begun to reach much farther than their own national boundaries. We even suspected that liberal bloggers might have been more apt to link offshore, given the implicit cosmopolitan element within liberal ideology and the nationalist strain in conservatism, but there was no strong difference between the conservative and liberal blog networks. Indeed, the conservative site, Little Green Footballs, was the least likely to lead to US-based sites (79.8%) and authors (77.9%). (In one case, for example, an LGF poster linked to an anti-American French publication, to confirm its pre-existing suspicions of that nation's reliability.)

## Discussion

We have examined the important network formed by six prominent gatekeepers of the news and political commentary blogosphere. Rather than describe only individual blog sites or parse individual blog postings to trace the sequence of revelations from one to another, we instead wanted to get a sense of where

they lead and a description of the larger network they activate. Given the importance of a broad-based conversation to a healthy public sphere, we considered how that network is structured with respect to three important boundaries: professional, political, and geographic.

Broadly speaking, the blogosphere – while dominated by citizen communicators – relied heavily on professional news sites and stories by journalists associated with professional media organizations. Indeed, our coding of only linked material probably underestimated the use of news accounts in blogs, since many posts contain a brief cut-and-paste excerpt of news accounts even if they do not provide a link to the specific originating source. Thus, the blogosphere incorporates professional journalistic voices as a complementary part of the network, and is not the source of relentless criticism of press bias that one may have sensed from some higher profile anti-media moments. These bloggers, for the most part, simply engage the facts and information carried in news accounts, accepting them at face value and using them to form their own arguments, reinforce views, and challenge opponents. They rarely challenge specific reportorial techniques and larger media structures. We may thus regard them ironically as in some ways preserving and reinforcing professional norms of journalism as they disseminate content generated by traditional reporting practices.

Based on these results we would argue that this network promotes the circulation of public dialog not only by linking together other bloggers but also in anchoring their discussions to the stream of information, opinion, and analysis produced by the traditional, professional news media and by professional journalists. In fact, much of what these blogs do is push readers to other information that they would not have otherwise read. We would therefore argue that, far from supplanting the professional news media, they provide an important secondary market for its material. Of course, this is a double-edged sword; a foul-up by a Dan Rather can receive intensive scrutiny by the blogging community, but a good news story may receive far wider circulation and recognition for the journalist who wrote it than ever before.

Thus, the blogosphere weaves together citizen and professional voices in a way that extends the public sphere beyond the boundaries policed by the traditional news media. From the standpoint of this study, we found it useful to draw the distinction between professional and citizen, although we recognize that the online network has increasingly blurred that distinction. Ohmynews, for example, is a Korean online newspaper with professional staff but featuring as much as 80 percent of its content from 'citizen reporters', who provide news for a minimal fee. European media monitor blogs, such as Bildblog started in 2004, use professional journalists acting essentially as citizens in their off hours to offer detailed analysis of the leading German tabloid *Bild*. And the

mainstream press sites have already begun to host blogs and recommend others off site, blurring the demarcation line where the 'professional' product ends. To the extent that many of our selected bloggers were, if not journalists, at least professional communicators (lawyers, etc.), their linking choices may have privileged professional news sites. Future studies should be able to further explore bloggers with different occupational backgrounds.

Concerning the political boundary, we did find an echo-chamber tendency, although not strong by any means. The ideological affinity of bloggers for their own kind is clear and is consistent with the polarization observed in the mass market for books and increasingly on the Foxification of 24-hour news channels. A more hopeful sign, however, is seen in the wide representation of non-partisan elements in the network, which works to prevent over-polarization. It is not simply an echo-chamber, even though news reports are no doubt processed through an ideological prism peculiar to the various blogs. Indeed, our attempt to typecast blog sites politically yielded a less than fully reliable affiliation measure, but we find this ambiguity significant in itself. A careful inspection of each site showed that many were tough to classify, particularly between 'conservative' and 'other political'. Clearly, not every blogger falls into a left or right classification, and many make an effort to be ecumenical and eclectic. The Instapundit law professor, for example, would often link to other law faculties with professional viewpoints on various issues, some of which may be characterized as conservative, others not.

Results show that the extension of the blogosphere across national lines – the geographic boundary – is still underdeveloped but bears further examination. In the virtual geography of the web, coding the 'cyberlocation' and physical identity of authors is difficult in that many of them work across platforms, hosting their own blogs, other personal websites, and guest commentaries on larger portals. The actual computer server may be in the USA, but the poster may not be. Ultimately, a cross-national comparison of the shifting online maps would be valuable. To do so, however, means recognizing that the blogosphere is not simply a feature of a particular country – as tempting as it may be to compare, for example, the US with the UK blogosphere. The national public spheres remain in place (e.g. Curran, 2002; Schlesinger, 2000) but gradually they are being transformed with the introduction of locationless spheres. It is in supporting these new spaces for global civil society that the blogosphere, with its many connections to traditional news media, has great potential.

Conducting this study was challenging to the extent that network analysis and online research are both difficult in themselves, and we combined them here. The online world is not as fixed and unambiguous a content analysis task as coding the front page of the *New York Times*. And in network analysis one is faced with defining the boundaries of that network in the first place

and tracing a complexity of relationships. We necessarily confined ourselves to a subset of the vast online network. In our case, we picked as a starting point the six original blogs and traced only the outbound links to other sites. Of course there are other nodes and links in this network, including comments attached to many posts, incoming links (registered as 'trackbacks'), and all of the links to various sites from these weblogs and others. Nevertheless, the high amount of traffic flowing through these six makes them a major gateway to the blogosphere.

Thus, we evaluate this new zone not blog-by-blog, or whether it replaces a previously 'professional' zone, but in how it is incorporated into the larger public sphere and works to interconnect voices, both citizen and professional, so they may confront and engage each other. As argued earlier, knowledge and authority are no longer closely held by 'insider' gatekeepers – or centrally located and assigned a sovereign territory – but embedded in this larger instrumental network (e.g. Castels, 1996). The post-2004 election voting analysis on the internet, for example, has shown how effective this interconnected cyberjournalism can be in arriving quickly at consensual understanding. Early rumors raised the possibility of widespread voter fraud, but in a combination of cross-referencing email, websites and weblogs, others including academic experts were able to repudiate some earlier analyses with their own (Zeller, 2004). The rapid interactivity and transparency of their online conversation made such a development possible. Thus, it is misleading to question, as many insist on doing, whether bloggers had an impact on the 2004 election or have greater influence now as a 'Fifth Estate' than professional journalists (e.g. Pew Internet & American Life Project, 2005). The impact of the blogosphere lies in the aggregate, in its location within a larger structure. Ultimately, this structure has great potential in meeting the normative expectations we have of the public sphere: access that does not depend on economic resources, autonomy from both state and market forces, and ability of participants to communicate across professional, political, and geographic boundaries on the basis of reason.

### Notes

1   These are still the highest ranked political blogs. Another popular ranking page (http://www.truthlaidbear.com/ecosystem.php) lists others, such as Michele Malkin and Captain's Quarters, as above TPM and Sullivan – but Technorati is the standard. Our blogs also closely match the top political blogs identified by Adamic and Glance (2005).
2   This proved methodologically more practical given that there may be more than one out-bound link per unit – but, as we define it in our coding approach, only one in-bound link per unit.

3    Their often voluminous number would have made coding a daunting task. Another practical reason to avoid coding comments is for comparability. Not all blog sites have them (in our case, only Daily Kos, Atrios, and LGF). In any case, comment posts are usually very brief and do not typically link off site – a requirement Singer (2005), for example, uses to 'link' (taking the user to another site).
4    A complete list of websites in the network is available from the author.
5    This pattern reflects the tendency of blogs to feature and promote like-minded fellow bloggers – an insider-style, informal linking lingo. Attacking the linked source uses a different style – making it necessary in future analysis to delineate the message and the messenger more clearly.

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